The Huxley Lecture

ON

RECENT ADVANCES IN SCIENCE AND THEIR BEARING ON MEDICINE AND SURGERY.

Delivered at St. Martin's Town Hall at the Opening of the Winter Session of Charing-cross Hospital Medical School, Oct. 3rd, 1898,

BY PROFESSOR RUDOLF VIRCHOW,

DIRECTOR OF THE BERLIN PATHOLOGICAL INSTITUTE.

THE second Huxley Lecture, which constituted the inaugural address on the occasion of the opening of the Winter Session at Charing-cross Hospital, was delivered, in English, on Monday, Oct. 3rd, by Professor Rudolf Virchow, of Berlin, at St. Martin's Town Hall, Lord Lister occupying the chair. The hall was completely filled in every part and Professor Virchow was accorded an enthusiastic reception on his entrance and again when he commenced his oration. Lord Lister, in opening the proceedings, said the reception which they had given showed how grateful they all were to Professor Virchow for making the journey all the way from Berlin for the purpose of giving this Huxley Lecture. Professor Virchow required no introduction to an audience like that, and he was sure he would best consult the wishes of all if without further preface he asked him to address them.

Professor VIRCHOW said: Lord Lister, my Lords, and Gentlemen,—The honour of being invited to deliver the second Huxley Lecture has deeply moved me. How beautiful those days of remembrance will be, which the English people keep in a manner which has become a national custom, and through which the memory of their intellectual heroes is kept alive to posterity! How more touching could this act of gratitude be than by this celebration at the same place where the genius of the great man was developed? We are filled not alone with admiration towards the hero, but at the same time with grateful recognition of the institution which planted the seed of high achievement for the benefit of the student. That you, gentlemen, should have entrusted to a stranger the task of giving these feelings expression seemed to me an act of such kindly sentiment, implying such perfect confidence that I at first hesitated to accept it. How am I to find in a strange tongue words which shall perfectly express my feelings? How shall I, in the presence of a circle of men who are personally unknown to me, but of whom many knew him who has passed away and had seen him at work, always find the expression which I wish as well as a member of that circle itself could do? I do not believe I shall succeed in this, but in spite of that I repress my scruples, and it is because I know how indulgently my English colleagues will judge my often incomplete statements and how fully they are inclined to pardon any deficiency in diction if they are convinced of the good intentions of the lecturer. I may assume that such a task would not have been allotted to me had not those who imposed it known how deeply the feeling of admiration for Huxley is rooted within me, had they not seen how fully I recognised the achievements of the dead master from the time of his first publications, and how greatly I prized the personal friendship which he extended towards me. In truth, the lessons which I received from him in his laboratory —a very modest one according to present conditions—and the introduction to his work which I owe to him form one of the pleasantest and most lasting recollections of my visits to South Kensington. The most competent witness of Huxley's early period of development—Professor Foster—presented in the first of these lectures a picture of the rapidly increasing extension of biological knowledge which must have excited not only our admiration but particularly the emulation of all who study medicine. Upon me is incumbent the duty of incorporating with this presentment the newer strides of knowledge and of stating their influence upon the art of healing. So great a task is this that it would be presumptuous even to dare to attempt in a single lecture to accomplish it. I have decided, therefore, that I must confine myself to merely sketching the influence of biological discoveries upon medicine and in this way presenting an example of Huxley's work which will be most intelligible to us. I must here make a confession. When I tried to ascertain how much time would be required to deliver my lecture as I had prepared it I found, to my regret, that its delivery would occupy nearly double the time assigned to me. I had therefore to reduce it to about one-half of its original dimensions. This could only be done by means of very heroic cuts, seriously damaging in more than one place my chain of ideas.

Huxley himself was trained in the practical school of Charing-cross Hospital, but he won his special title to fame in the domain of biology. As a matter of fact, at that time even the name of biology had not come into general use. It was only recently, as I showed in my lecture on the position of pathology amongst biological studies, that the idea of life itself obtained its full significance. Even in the late middle ages it had not sufficient strength to struggle through the veil of dogmatism into the light. I am glad to be able to-day for the second time to credit the English nation with the honour of having made the first attempts to define the nature and character of life. It was, as I have pointed out in the Croonian Lectures, Francis Glisson who, following expressly in the footsteps of Paracelsus, investigated the *principium energeticum*. If he could not elucidate the nature of life he at least recognised its main characteristic. He was the first to describe as "irritability" the property on which the energy of living matter depends. He thus succeeded in setting aside the mystical idea of the spiritualistic "Archæus" which Paracelsus and his followers had placed in the forefront of their deliberations in venturing to locate the *principium energeticum*. in matter itself. How great was the step from Paracelsus to Glisson, and I may add from Glisson to Hunter. According to Paracelsus life was the work of a special *spiritus*, which set material substance in action. To Glisson matter itself was the *principium energeticum*. Unfortunately he did not confine this dictum to living substances only, but applied it to substance in general—to all matter. It was Hunter who first announced the specific nature of living matter as contrasted with non-living, but he also did not attain perfect clearness of vision because in the development of English medicine the idea has been allowed to take root and grow that life was not bound up with structure. So that John Hunter, also, was led to place a *materia vitæ diffusa* at the head of his physiological and pathological views. Hence he arrived at the assumption of so-called plastic substance, and so it happened that in place of the old Greek humoral pathology there arose a new humoral pathology—hæmatology. According to the teaching of Hewson and Hunter the blood supplied the plastic materials of physiology as well as the plastic exudates of pathology. Such was the basis of the new biological method—if one can apply such an expression to the incomplete doctrine of 1842, when Huxley was beginning his medical studies at Charing-cross Hospital. Of pathology in England John Hunter was the accepted master and so remained for many years thereafter. So great was his influence that Continental medicine also recognised it. To this I can myself testify as I was at this time at the end of my university studies. It would lead too far afield were I to recount in this place how it happened that I myself, like Huxley, was early weaned from the pernicious doctrine of humoral pathology. It must suffice to say that salvation lay in the same science which had already once before—in the sixteenth century—brought about deliverance from humoral pathology. It thus came about that Vesalius threw over authority and founded human anatomy upon direct investigation. Since then anatomical studies have been much improved. When Huxley himself left Charing-cross Hospital in 1846 he had enjoyed a rich measure of instruction in anatomy and physiology. How great this was can be gathered from the interesting statistics which Professor Foster has collected with the aid of Huxley's distinguished fellow-student, Sir Joseph Fayrer. Of the lectures which junior students attended in the three years much time was devoted to anatomy and physiology. Thus trained, Huxley took the post of naval surgeon, and by the time that he returned four years later he had become a perfect zoologist and a keen-sighted

ethnologist. How this was possible anyone will readily understand who knows from his own experience how great is the value of personal observation. For the development of independent and judicial observation is of the highest importance to young men who desire to collect rich treasure of positive knowledge. Good judgment and a long sea voyage afforded a valuable opportunity for original work and deep reflection. Freed from the formalism of the schools, thrown upon his own intellect, compelled to test each single object as regards properties and history, he soon forgets the dogmas of the prevailing system and becomes first a sceptic and then an investigator. This did not fail to affect Huxley, the Huxley whom we commemorate to-day, and in alliance with whom we can point to Hunter and Darwin. The path on which these men have achieved their triumph is that which biology in general has trodden with ever-widening strides since the end of the last century: it is the path of genetic investigation. We Germans point with pride to our countryman who opened up this road with a full conviction of its importance and who directed towards it the eyes of the world, the poet-prince Goethe. He did for plants what was done in the case of animals by Wolf, Meckel, and other members of the German embryological school. These men began with the study of the "ovulum," but this very soon showed that the egg itself was organised and that from it arose the whole series of organic developments. When Huxley after his return came to publish his observations he found the history of the progressive transformation of the contents of the egg already verified, for it was by now known that the egg was a cell, that from it fresh cells and then organs arose. The second of his three famous papers—that on the relationship between man and the animals next beneath him—limned in exemplary fashion the parallelism in all animal beings. But beyond this, stepping boldly across the border-line which tradition and dogma had drawn between man and beast, Huxley had no hesitation in filling the gap which Darwin had left in his argument and explaining that "in respect of substance and structure man and the lower animals are one." Whatever opinion one may hold as to the origin of mankind the conviction as to the fundamental correspondence of the human organisation with that of animals is at present universally accepted.

All biological science, especially physiology and pathology, and in particular all that has to be based upon experimental research, must first be investigated in animals. That which requires morphological confirmation finds support in comparative anatomy, histology, and embryology. The basis of our comprehension of the theory of medicine actually rests nowadays on minute microscopic investigation, for the elaboration of which the animal tissues form the indispensable control-object. Suffice it to say that in scientific biology the division between man and beast becomes less and less defined. But only let it be remarked that the division between the abstract man and the abstract animal is the same relation as, in a different form, obtains between plants and animals. How many definitions of this have been put forth in the course of time! If we place a given animal and a given plant side by side difficulties vanish which we had only raised by our own definition.

The greatest difficulty in the advance of biology has arisen in this way: mankind, following the natural tendency, has set the search after the unity of life in the forefront of its consideration. As a matter of fact, what is more natural than the conclusion that life as a special phenomenon must also have a special basis, and that the material process of life must be derived from a common cause? During last century an assumption was made, with ever-increasing conviction, of a special force—vital force. Nowadays we can still perceive the logical errors which this assumption rendered possible. Time has, however, passed judgment upon it and to-day no one continues to speak of vital force. And yet the necessity for a single basis of all vital manifestations remains. How is this to be satisfied? This is a question which is not alone of great theoretical interest, but which has become the indispensable foundation for practical work, and especially for medical practice. In order to reach this it is first of all necessary to dispense with all the dogmas of the schools and to seek to construct an objective picture of the nature of vital processes. As regards material construction, men and the higher animals and plants are not simple beings—on the contrary, they are put together from many units. The specific activity is present in the organism not alone in its perfect and fully grown form but also during its development and growth. How can a single power, whether we call it in the spiritualistic sense spirit, soul, or in the physical sense "vital force" or electricity, build up the organisms? Or if this power resided in a single organ, whether it is brain, spinal cord, or heart, how could those brainless, heartless creatures be explained which at the beginning of this century were the battle-ground of the mystics? There is here, in my opinion, only one theory possible. The life possessed by the higher organisms is not a single one; their life and all their activities only become intelligible when we go back to an exact representation based upon a kind of instinctive observation of the life of their parts. Each constituent part of a living organism has its special life. No one of the older authors proclaims it more distinctly than Paracelsus, but he destroyed this good idea by attributing to each living part a particular *spiritus*. The best of the succeeding biologists were held by this notion as in a snare instead of busying themselves in the explanation of this action. Those in medicine have completely turned their attention, like true observers, to the study of individual parts. As I pointed out at the Medical Congress at Rome it stands most clearly revealed in the history of pathology that the division of a body into its larger regions, then into organs and tissues, and then cells and cell territories, was the step which helped to the comprehension of disease. The study of regions was followed by that of organs and this again by that of tissues, and finally by that of the cell itself. But what is true in pathology must hold also for physiology, and, as a matter of fact, physiology has passed through the same development and phases. One gradually comes to understand that the life of intermediate parts is perfectly clear if one looks away from the *Archæi* of the organs and tissues and keeps in view only the life and the activities of the single cells. For the life of an organ is nought else than the sum of the lives of the single cells which are gathered together into it; and the life of the whole organism is not an individual, but a collective function. If such a collective being is analysed, no matter if it be a whole organism or a single organ, or only one tissue which is presented, the first requisite for it is that one should regard the single parts and cells as the factors of existence. Unicellular plants and animals have during this century been continually more fully and better studied; botanists and zoologists have become the teachers of the biologist and the pathologist. The discovery of the development of complete beings from the ova of animals and the corresponding germ cells of plants has bridged the gap between isolated living cells and higher organisms. In a medical school, where the teaching is almost entirely concerned with human beings, we might put this sentence very prominently, "The organism is not an individual but a social mechanism." An exact analysis of this mechanism always brings us at last to cells; they are the ultimate constituents of all tissues. Hence we call them living elements and regard them as the anatomical basis of all biological analysis, whether it has a physiological or pathological object in view. Now, two particular propositions must be stated: (1) that living organisms, like every organ and tissue, contain cells; and (2) that the cells are composed of organic chemical substances which are not themselves alive, but the mechanical arrangement of which determines the direction and power of their activity. The old students with their theory of the so-called plastic exudates in their earliest studies translated into our latter-day paths would recognise this continuity in most pathological new formations. It would establish the grounds for the dogma of the origin of life from non-living matter. Experience has taught us the exact opposite.

I may here speak a little more personally than is elsewhere my intention. Perhaps it will be more intelligible to the students of this hospital and will make more impression if I relate how I myself arrived at my views. It was towards the end of my academical studies, more than fifty years ago, that I had to take up the work of assistant in the ophthalmic clinic of the Charité Hospital at Berlin. We had severe cases of keratitis, but I saw in them no exudation. Numerous cataract operations were performed; the wounds were closed, but not by plastic exudation; this was absent from all corneal scars. Could this be explained by the circumstance that the cornea, apart from its circumference, is a non-vascular tissue? I then turned my attention to the non-vascular tissues; first to the articular cartilage, and behold, here also I found the greatest changes without the presence of exudation, or at any rate of plastic exudation. My experimental studies then extended

to the walls of the larger arteries and then also in part to the veins, and they showed equally that they can undergo great changes without even a trace of exudation. Later investigations on endocarditis led to the same result, provided that parietal thrombi are not regarded as exudation. In all these cases and in every place we found changes in the tissue cells—active, such as multiplication of nuclei, or passive, such as fatty degeneration. It is not necessary to go further into the matter to show how great is the action of these pseudo-exudative processes. Most of these processes are of the nature of proliferations. Whoever calls a proliferative layer an exudation will never obtain an objective view of the proceeding. There is not the slightest necessity for the genuine observer to hold to the arbitrary and totally erroneous formula of a plastic exudation; there is no such thing as plastic exudation which is ever simply amorphous, the cells which have been found in it have not arisen there. It is proved in numberless places. The doctrine of the discontinuous origin of pathological new formations is set aside. Every such new formation presupposes tissue from which its cells arise, that is, its matrix. Pathology has been late in arriving at a knowledge of this correspondence, but I think it has acquired special value for biology in general. Proliferation is an active property of special cells but it cannot be performed by all cells alike. That in no way alters the fact that it can only be performed by cells. It is just as little a function of the entire organism, for this would then have to be unicellular. In this property lies the explanation of origin from a single egg, the wonderful process which comes to pass but once in the life of the animal. Once the tissues have arisen each cell of the tissue may, in respect of proliferation, be compared to an ovum; it brings forth a new progeny from which new tissue grows, this tissue bearing, as a rule, the stamp of its matrix; it is built on the maternal type. And here lies the key to the knowledge of heredity, that puzzling appearance with which mankind has ever busied itself.

It is the custom to describe as hereditary all diseases which reappear in different generations of the same families. Thus, one speaks of hereditary tuberculosis and hereditary cancer. It is, in fact, not difficult to produce genealogical tables which demonstrate the recurrence of paternal maladies in children and grandchildren. Much trouble has been devoted—in my opinion without result—to the seeking of the germs of such diseases in the ovum or the semen. One is compelled to pass on to generations of cells which took origin after conception. As we pass from the time of conception the more numerous do we find the alterations in the formation of cells and in the formation of embryonic tissue. At the same time there is a greater possibility of the alteration having arisen after the formation of the first cells and hence that the existing cause may have commenced to act at that time. If we set aside this possibility nothing else remains but to assume that from conception from the organs which produce the disease a predisposition is transmitted which is already present in the earliest cells, even if it cannot be recognised in them.

There is a highly remarkable question which every year claims the attention of medical men more and more, and this is what is described as *heterotopia*. It has long been known that hairs are present not only on the external skin, to which they properly belong, but also in internal organs, where they are quite out of place. Such structures are known as dermoids. As a matter of fact, in fœtal life the smaller or greater rudimentary fragments can be separated from all their natural places of abode and removed to other spots, where they, so to speak, find a new home and can undergo all the further changes which are dependent on their cutaneous nature. It is thus that cysts and tumours can arise from them. But the most remarkable examples of such are found in certain glandular organs which present the unities of similar parts. Amongst these a high place is taken by two organs which have recently demanded much attention—the thyroid and suprarenal glands. On their surface may often be observed the crushing forward and progressive isolation of separate parts in the form of nodules or small lobes. But occasionally these nodules pass completely out of association into the main body of the gland, and are found disconnected in a perfectly strange place more or less removed from their seat of origin. In the case of the suprarenals the cells travel to neighbouring spots in the interior of the kidneys and the deeper parts of the peritoneum as far as the pelvis. And at all these phases they may undergo further change as a further starting-point for tumour formations.

It is inadvisable to go into minuter details; only a few of the greater landmarks can be referred to. One of them I will mention briefly, as I have written many long papers upon it—the necessity for distinguishing between the cause and the essential nature of infectious diseases. The nature of the disease depends upon the behaviour of the organs and tissues with which the bacteria and their metabolic products meet. From my point of view this distinction is of paramount importance. First, there is the general relation of the smaller parasites to the diseases determined by them. Under one name which takes us back into the old days of humoral pathology, and which I was the first to introduce into common parlance, are grouped all the processes which are produced by the invasion of morbid substances under the general designation of infection. The relation between infection and intoxication was presumed and it was not without good reason that the designation was retained. Among the innumerable infectious diseases which affected not only man but animals this remarkable property in contagia came to the front—that they multiplied in the body and so, besides infection as such, produced an immeasurable quantity of fresh virulent substance. In this respect they approach the living beings and the idea arose that they were themselves alive. With the discovery of parasitic animals conjecture became fact and nothing was easier than to generalise this fact and assume the presence of independent organisms in each contagious disease. It became known that parasitic animals and protozoa can so give rise to infection. Between bacteria and fungi there is more than a slight difference, but for convenience the name of bacteria is retained as a general designation. Owing to the novelty of the circumstances in which they are placed botanists have not even yet succeeded in their customary duty of giving every new plant its special name. This omission is understood and forgiven, but it does not in any way alter the erroneousness of the theory which attributes every impurity to bacteria on the sole ground of its contagiousness. It may be said that the contagious nature of disease shows suspicions of bacterial origin, but it should not be simply called that, though it allows the conscience to sleep. Some of the most important contagious diseases have succeeded in resisting the struggle to find in them a parasitic contagion. For example, many have been the sanguine hopes of finding the parasite of syphilis and as many have been the failures; the coccus of gonorrhœa alone has been discovered, the bacterium of syphilis remains a desideratum. You will remember the certainty with which it was expected that a parasite was the causal agent of variola. More than one was found, but none pathogenic. In hydrophobia all appearance seemed to promise that it would prove to be a micro-parasitic disease. Its contagion is undoubted; the vaccine has been prepared and yet no one has been able to cultivate a specific bacillus. The same may be said of some other specific diseases. Painful as it may be one can do nothing but observe. Perhaps the pathogenic bacteria will be found, but as long as they are not discovered all assumption is useless if not dangerous. To have learned this is to have made a mighty stride in the biology of disease.

A further question is the mode of infection. As long as infection by animal parasites was regarded as the type of infection generally the destructive action was described as the result of a mechanical action just comparable to a bite or devouring. The exact study of the larger entozoa soon brought about a complete conversion.

The feeding of bacteria and vegetable and plant-like parasites has to be regarded in the same way. They certainly injure the tissues in which they reside by the consumption of materials, but their action is not limited to this. This much has been already learned in the study of fermentation and putrefaction. It is admitted that organic matter is destroyed by them, but in addition they produce new substances, some of them eminently poisonous. It has been known for centuries that alcohol is produced by fermentation, but the putrefactive poisons could not for a long time be isolated. To the whole group the new term of toxins has been applied. They are in part crystallisable, invariably diffusible substances, which are bound up neither in cells nor other formed elements, though they are produced by the cell action of the parasites. They are now described as metabolic products, a term which has far more

sound than sense. In former times people were content to call them secretory products, and I think it would be better to stand by this term.

It would be called carrying coals to Newcastle were I to sketch in London the beneficial effects which the application of methods of cleanliness has exercised upon surgical practice. In this city, where the man still lives and works who by devising this treatment has introduced the greatest and most beneficent reform that the practical branches of medical science have ever known, everyone is aware that Lord Lister has had results which the new theory of fermentative and septic processes fully confirms. Before anyone had succeeded in demonstrating by exact methods the microbes which are active in various diseases, or in establishing the special functions which they performed, Lord Lister had learned in a truly prophetic revelation the means by which protection against the action of putrefactive organisms can be obtained. The opening up of further regions of clinical medicine to the knife of the surgeon and a perfect revolution in the basis of therapeutics have been the consequence of the work of Lord Lister, whom I am proud to be able to greet as an old friend to-day. Already and always he will be reckoned amongst the greatest benefactors of the human race. May he be long spared to remain at the head of the movement which he called into existence.

It remains for me to say a little word concerning the other great problem, the solution of which the whole world is awaiting which anxious impatience. I refer to the problem of immunity in the sense of practical artificial immunisation. It has already happened once that an Englishman has succeeded in applying this to the nearly complete destruction of at least one of the most deadly infectious diseases. Jenner's noble discovery has stood its trial as successfully as he hoped. In our hands vaccination is, with the aid of the Governments, spreading continually. In the same way the work of Pasteur also raises our admiration and the new doctrine of antitoxins is continually acquiring new adherents, but it has not yet emerged from the conflict of opinion. Still less is the secret of immunity itself revealed. We must still become well accustomed to the thought that only the next century can bring perfect light and certainty on those points. The homœopathic notion that toxin and antitoxin are one and the same seems so foreign to our biological ideas that very many experimental and practical proofs will be required before it can be admitted into the creed of the future. We must succeed before then in finding the means of strengthening the cells in their fight against bacteria.

We must, in conclusion, turn once more to the special cells which build up the body and which arise from proliferation within the body. These have numerous analogies with microbes. They also are independent living beings, or, as they say, elemental organisms implanted in the social structure of the body. They can be removed and transplanted into new situations. The process is always bound up with a certain number of living elements. It is always cellular in character. It is not the flowing blood which makes the tumour or cells; it is the mother cells from which all new formation arises. From this consideration I have drawn this conclusion on the local action of the cells bound up in certain parts. Cellular pathology admits the principle of destroying local disease by local measures, be those measures medical or surgical. It is with great joy I see this becoming more generalised. Hence follows in surgery the recommendation of early operation for the destruction of the focus of disease. Those cells also, just as do bacteria, exercise chemical influences apart from the destruction which they effect by absorption. They secrete chemical substances and these appear first as tissue fluids, passing later into the circulation. Thus arises a change in the composition of the flowing juices, particularly of the blood—in fact, a dyscrasia. This is, as I have always explained, a secondary dyscrasia, quite distinct from the primary dyscrasias of the humoral pathologists, by localization of which topical diseases, and especially tumours, were supposed to arise. According to my view, each dyscrasia is determined by the taking in of products of tissue secretion which may now be called metabolic products or recrementitious substances. The tissue juice and excreted material has obtained of late years much attention and has provided materia medica with thyroid juice and thyroidin. New substances resembling alkaloids or albuminoids are isolated from various organs, experimentally tested, and technically worked up. So arose injection therapeutics, on the results of which we are not yet in a position to pass a final judgment. But everyone who is sufficiently unprejudiced must admit that they have in many cases been good. Experience will determine the value of these methods. You must learn by the aid of practice to deduce lasting theoretical proofs. But never forget that the source of all these substances and secretions is the cell activity of living tissue, and that its therapeutical or pathological remedial action on the organs or tissues can accomplish no result besides that of exercising a regulating influence on cell activity. May the Medical School of Charing-cross Hospital continue upon the newly opened paths and do so fortunately, and at the same time may its students never forget that neither the physician nor the naturalist dares to dispense with the cool head and calm spirit of practical observation and critical judgment.

Dr. T. H. GREEN (physician to the hospital), in the unavoidable absence of Sir Joseph Fayrer, proposed a vote of thanks to Professor Virchow. He thought it would be very difficult to adequately represent the measure of their indebtedness to the lecturer for coming over from Berlin, whereby he conferred a great honour not only on their medical school but also on the whole medical profession of this country. He believed that never in this city had the session of a medical school been opened under such favourable auspices as theirs was that day. Thirty years ago he had the good fortune to be a pupil of Professor Virchow in Berlin and it was therefore a source of great gratification to him to be allowed to propose that vote.

Dr. BLACK seconded the motion, remarking that he also could look back with pride at having been a pupil of the distinguished lecturer.

The motion was put from the chair and carried by acclamation, Lord LISTER expressing his sense of the profound debt they owed to Professor Virchow for his learned, profound, and beautiful address.

Professor VIRCHOW, in reply, said: Gentlemen, allow me to express only somewhat of the thanks I feel for this glorious reception. It was one of my warmest wishes to see Charing-cross Hospital, as the scientific birthplace of such great men as Livingstone and Huxley and others who followed, and I promise you that I will never forget this reception and the days when I was in your midst. And may you, also, my young colleagues and students of this hospital, see in these great examples of whom I have spoken this evening prototypes of a good, honest, scientific life.

An Introductory Address
ON
THE IMPORTANCE OF PERSONAL CHARACTER IN THE PROFESSION OF MEDICINE.

Delivered at the Opening of the Winter Session of the Medical Department of the Yorkshire College, Leeds, on Oct. 3rd, 1898,

BY CHARLES J. CULLINGWORTH, M.D. DURH., F.R.C.P. LOND.,
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MR. DEAN AND GENTLEMEN,—I consider it a very great honour to have been invited to take so prominent a part in the interesting ceremony of to-day. As an old Leeds student and a native of this city it is with both pride and pleasure that I observe the unmistakeable signs of healthy prosperity in my old school, now the Medical Department of the Yorkshire College. Your buildings, your laboratories, your teaching appliances, and, of course, your fine hospital, will not only bear comparison with other similar institutions in this country but are so modern and so complete as to warrant a passing twinge of envy in the breast of a London teacher. I should, however, be making but ill use of an exceptional opportunity if I wasted the few minutes at my disposal in elaborate compliments, however well deserved they may be. My desire to-day is to say a few words which

shall if possible be encouraging and helpful—first to those of my younger brethren who are still *in statu pupillari*, and, secondly, to those who have just completed their curriculum and are about to engage in that struggle for existence which is apparently becoming every year more severe and more hazardous to the well-being of the individual practitioner both "in mind, body, and estate."

First, then, allow me to address myself to those who are still students. It is now a good many years since Sir James Paget published in the St. Bartholomew's Hospital Reports a short paper embodying the results of an inquiry as to what became of a thousand of his pupils within fifteen years of their entrance at St. Bartholomew's Hospital. It was a most interesting article and is still well worth reading in its entirety, for what was true of the medical student of thirty years ago is, in the main, equally true of the medical student of to-day, and, so far as I am aware, no similar inquiry has been made either before or since. Of the total number of Sir James Paget's pupils during the period embraced in the inquiry (1839–59) many had, of course, been lost sight of, but the career of 1000 of them was known either to Sir James Paget himself or to his colleagues, the late Mr. Callender and Mr. (now Sir) Thomas Smith, both of whom were engaged with him in the investigation. Of the 1000, 23 had achieved distinguished success; 66 had achieved considerable success; 507 had achieved fair success; 124 had achieved very limited success; 56 had failed entirely; 96 had left the profession; 87 had died within twelve years of commencing practice (21 of them from diseases incurred in the exercise of their professional duties); and 41 died during their pupilage (17 of them from phthisis). It may be explained that in this summary "distinguished success" means that those classed under this heading had gained leading practices in counties or very large towns, or held important public offices, or had become medical officers of large hospitals or teachers in great schools. Those are stated to have attained "considerable success" who had gained, and still held at the time the paper was written, "high positions in the public services or leading practices in good districts," or who had already retired on their earnings, or who had won for themselves "much more than ordinary esteem and influence in society." The rest of those who could be said to have achieved any sort of real success constituted the third class. This class, which might be called the moderates, embraced more than half the total number of those whose histories were known. Of the other classes I need not here speak in detail beyond calling attention to the curiously large number that left the profession, nearly 10 per cent. of the whole. Most of those who are classed under this heading discarded the medical profession for other pursuits—the Church, the army, the stage, commerce, and agriculture. It was the concluding portion of the paper, however, which made at the time the strongest impression on my mind and which has induced me, even after this lapse of years, to bring it before you to-day. "Of course," says Sir James Paget, "in watching and reflecting on the careers of my pupils I have come to some strong beliefs on subjects of medical education, but this is not the place for publishing them. Only one I will set down, which may be of use to future pupils and is justified by some hundreds of personal recollections. In remembering those with whom I was year after year associated and whom it was my duty to study, nothing appears more certain than that the personal character, the very nature, the will of each student had far greater force in determining his career than any helps or hindrances whatever. All my recollections," he continues, "would lead me to say that every student may draw from his daily life a very likely forecast of his life in practice, for it will depend on himself a hundredfold more than on circumstances. The time and the place, the work to be done, and its responsibilities will change; but the man will be the same except in so far as he may change himself."

It may be said that this was all very well thirty years ago, but that times have changed and that whereas it may have been and, no doubt, was then possible for a man with character and perseverance by sheer force of good behaviour and steady plodding to come eventually to the front, no man could do so to-day unless he also possessed a more than average share of intelligence. For the general standard of knowledge in our profession has been raised and the range of knowledge greatly widened, so that much more is required to-day both in quantity and quality even of the ordinary pass man, to say nothing of the honours men and prize-winners. This way of putting the matter sounds exceedingly plausible, but it leaves out of view the fact that entrance into the profession is now guarded in a way in which it was not guarded during the period of which Sir James Paget was writing and that whereas a man could then enter upon his course of medical study without having given any proof of having received a fairly liberal education it is impossible for him to do so now. The preliminary examination in general education which must be passed before a student can register, though not a very severe test, is quite severe enough to keep back the hopelessly ill-educated man whatever good qualities he may possess. Hence the struggle is not, as might be supposed, between the man who has character without intellectual training and the man who has character with it, but between the man who has intellectual training *with* character and the man who has intellectual training without. In such a struggle victory rests in the end with the man who, to his intellectual attainments, adds character. As Sir James Paget says, "the time and the place, the work to be done, and its responsibilities" may change, but the personal character of the student remains now as then the chief factor in determining his ultimate career.

It is sometimes said that the men who win prizes during their student life are not the best men and seldom fulfil the expectations of their teachers and friends. I have a shrewd suspicion that the author of this dictum was some ingenious but lazy man who thought to cover his own deficiencies by belittling the successes of his more industrious fellow-students. Let anyone who is interested in the subject and anxious to arrive at a correct estimate of the amount of truth in this statement take up a London University Calendar and refer to the honours lists in the various subjects of examination for the degrees in medicine. Here and there, of course, he will find an unfamiliar name amongst those who from year to year have taken the highest honours, but he will probably be astonished at the comparatively large number of names which have since become well known and, in many cases, even distinguished as those of recognised leaders of our profession. Amongst those, for instance, who in the years long gone by obtained scholarships and exhibitions in the examination for the degree of Bachelor of Medicine will be found the familiar names of Richard Quain, Edmund Parkes, George Johnson, Alfred B. Garrod, William S. Savory, Samuel Habershon, John S. Bristowe, J. Russell Reynolds, Henry Thompson, Joseph Lister, William Roberts, and William H. Broadbent, all of whom may certainly be said to have fulfilled the promise thus given of future distinction and success. I speak of the London University because I happen to know it best. I have no doubt the same is true of the other universities, including your own still youthful Victoria University, in which, as some of you know, I take a special interest as having borne a somewhat active part in the work of administration during the anxious and perilous years of its early infancy. Holding this view of academic distinctions, the spectacle of a student stepping forward to receive a prize has for me far more than a mere passing interest. I am conscious of having witnessed an important scene in the drama of a life. He must be a singularly unemotional person who can, for instance, witness such a ceremony as we have witnessed to-day without having his pulses stirred and his sympathies excited. For surely no study is so absorbing as that of the development of the story of a human life, especially when events have shown that life to be one of more than ordinary promise. I shall certainly hope and expect to hear again of the recipients of to-day's honours and to learn that the successes of to-day have been a mere forecast of the many which are to follow. The conditions of success are pretty much the same in student life as they are elsewhere. The essentials—those conditions, namely, upon which all the others necessarily rest—have long ago been summarised in the well-known motto, "Mens sana in corpore sano." There is at present no need to emphasise the latter part of this motto. The tendency appears to me rather in the direction of giving it undue prominence. I do not yield to any in my sense of the importance both to the race and to the individual of out-door games, athletic exercises, sports, and all the various means of developing the capacities of the body, and keeping them at their best. But when I find them the all-absorbing topic of conversation, when I realise that athletic achievements are the surest way to distinction and popularity, when I observe that an increasingly large part of

our newspapers is filled with the record of them and that no part of the day's news is read so widely or so eagerly, and when I am actually assured that schools and colleges are selected on considerations affecting their athletic fame rather than their reputation for scholarship, I am tempted to wonder whether the first part of the motto I have quoted is receiving sufficient attention and whether the needs of the body are not absorbing a little more than their share.[1] "Propose this test—," says Browning,

> "Thy body at its best,
> How far can that project thy soul on its lone way?"

I have said enough, however, on this head. The strong common sense of our English-speaking race may be depended upon for sooner or later adjusting the balance and for taking care that whilst the body receives its due share of cultivation the needs of the mind shall not be seriously overlooked.

"There is no profession," said an English bishop, preaching recently to a medical congregation in St. Paul's Cathedral, "except perhaps that of the Church, in which character counts for so much as it does in the profession of medicine." If that be true, and I feel certain that it *is* true, it becomes of the highest importance to keep up during student life a high moral standard. The true greatness of any school or college, medical or otherwise, must always depend in the long run not upon its athletic or academic achievements, but upon the high standard of its moral tone. If you desire your own college to enjoy the best kind of pre-eminence, it must be by every one of you, senior and junior, helping to keep up the standard. You who are here to-day for the first time will find it a great change from ordinary school or college life, with its discipline and supervision, to the life of a medical student. During a great part of every day you will be free to go where you like and do what you like, and your future much depends upon the use you make of this freedom. And you who are seniors must remember that the juniors will take their tone from you. The influence of the senior students upon the junior is incomparably greater than that of the teachers on either and gives the senior student a position of great responsibility.

I must now, however, pass on to say a word to those of you who will no longer be students in the technical sense of the word—those, I mean, who have completed their curriculum and obtained their diplomas to practise. Students in the broader and equally true sense of the word you will, I hope and believe, continue to be to the end of your lives. In fact, your experience will be very different from that of the majority of your brethren if, after being a few years in practice, you do not find that you have learnt more of your profession since you became qualified than you did before. At present, no doubt, the feeling uppermost in your minds is one of thankfulness that you have at last come to the end of what at one time must have appeared to be an almost interminable series of examinations. I entirely sympathise with my old friend and teacher, Mr. Pridgin Teale, in his opinion that the medical student is over-examined. And yet it is difficult to see in what other way than by examination his knowledge and his fitness to practise his profession can be adequately tested. I am quite sure of this, however, that although Mr. Teale did not succeed in carrying his resolution in the General Medical Council, his forcible speech in moving his proposition and the discussion which followed will prove to have had an excellent effect upon the examiners. It is well that examiners should be reminded from time to time of the main object of examination—namely, to test the fitness of the candidate to be entrusted with the care of the sick. The importance of keeping this in view was brought home very forcibly to all who were present by an amusing incident which took place at a meeting of the board of studies when the regulations of the Victoria University were under discussion. A member of the board, overflowing with compassion for the unfortunate candidate, proposed to lower the pass standard for the M.B. degree from one half of the maximum number of marks obtainable to one-third. It was a bold suggestion, and after the resolution had been duly seconded, there was for a few moments an ominous silence. Then one of the arts professors rose and asked the chairman, in the most innocent manner, if he was correct in supposing that this degree would confer upon its possessor a legal qualification to practise his profession. The chairman replied that it would. "Then I presume," continued the professor, still in the blandest tone, "that if we vote in favour of this resolution it will be equivalent to saying that we shall be quite satisfied if, when the newly qualified graduate has become the medical attendant in our own families, he is correct in his diagnosis and treatment once out of three times." It is needless to say that nothing more was heard of the resolution. Obviously the community must be considered in this matter as well as the candidate. But I am now addressing those more especially to whom the question of examinations has fortunately ceased to be of immediate personal concern and I may therefore leave a subject which is always liable to awaken at least *some* unpleasant recollections.

It is well for those of you who are about to enter upon the practice of your profession to be reminded at the outset that the practice of the medical profession is not altogether a life of luxury and ease. You will have a great many unpleasant experiences. You will find, for example, that you will not have one hour out of the twenty-four which you can positively call your own—in the sense, that is, of being free from the liability to interruption by a professional call. You will sometimes feel, when you have an anxious case under your care, overwhelmed by a sense of awful responsibility. You will then realise what it is to have in *your* hands, resting on *your* decision, the issues of life and death. Nothing can make these things endurable but enthusiasm. You must love your profession with a devotion not merely sufficient to counterbalance all its difficulties and drawbacks, but intense enough to make you blind to them. Given this devotion and the vocation of the medical man becomes, to my mind, the finest in the world.

I spoke a few moments ago of the danger of men during their student life, in their eagerness to promote the health of the body neglecting the cultivation of the mind. This danger is by no means at an end when a man has left the school and hospital and has entered upon active practice. Henceforward it takes the form of a tendency to become absorbed in his profession and to neglect other means of mental cultivation. None of us is strong enough to bear with impunity the strain of professional life without some kind of habitual mental recreation. It is therefore of the highest importance to set up a hobby. It does not much matter whether the hobby be a branch of natural science, or a department of general literature, or something different from either. The essential thing is to have an intellectual hobby of some kind, so as to be saved during the absorbing activities of our professional life from professional narrowness and that partial atrophy of the mental faculties which comes of disuse, and also in order to be provided when our working days are over with an unceasing source of wholesome interest.

The keenness of the struggle for existence is constantly in danger of making us forget our high calling, forget that we are members, not of a trades' guild but of a learned profession. I would not on any account utter one word in disparagement of trade. It would particularly ill-become me to do so in a city whose trade is the source of her greatness. But I hope I may, without offence, venture to point out that the commercial code of ethics differs in some important respects from the professional code. The first consideration of the business man, for example, in regard to any given transaction is how it will affect his own interests or the interests of those whom he represents. It is for his customers to judge for themselves how far *they* are likely to benefit by the bargain. The professional adviser, on the other hand, is expected to make his patients' well-being his chief care and not to be influenced in the advice he gives by motives of self-interest. Mr. Brudenell Carter tells us that the late Sir Prescott Hewett was in the habit of saying that it was not enough for a medical man to be honest—he must be chivalrous. We are ready enough to take to ourselves the title of a noble profession, but we must remember that to be truly noble our profession must set before it, and act up to, a high ethical standard. Its spirit and its methods must leave no room for the taunts of cynicism. There must be amongst its members no mean attempt to displace professional rivals by offers of cheaper service or to discredit them by whispered suggestions of professional incompetence. There must be no aping of the advertising methods of the charlatan or lowering our professional societies by the introduction of some of the more objectionable features of trades'

[1] To show that this is not an over-statement of the exaggerated and even absurd importance at present attached to these matters, let me give an instance in point. In the university cricket match a representative of Oxford made a heavy score, what in cricketing language is called "a century." I am told that this gentleman thereupon received two telegrams, each of them offering him a mastership in one of our public schools.

unionism. There must be no practising for private gain under the misleading name of a dispensary or indiscriminate recommendation of costly methods of treatment in which the prescriber has a pecuniary interest. And yet, I fear, some of these things are not altogether unknown amongst us. We want you of the coming generation to realise that the fair fame of our beloved profession in the immediate future rests with you. We trust to you to keep up its best traditions and to maintain that reputation for nobility of aim and conduct which it has hitherto possessed and which of right belongs to it.

Let me conclude with one or two extracts from a very ancient document, dating from the fifth century before the Christian era, and known as the Oath of Hippocrates. The best authorities consider it highly probable that it was written by the great sage himself. If not, it is practically certain, from internal evidence, that it was written in the Hippocratic age. It appears to be in the nature of a declaration made by the pupil when the master is about to undertake his instruction in the art of medicine. "I swear," says the youth, "by Apollo the physician, and Æsculapius, and Hygeia, and Panacea, and all the gods and goddesses, that according to my ability and judgment I will keep this oath and stipulation. I will reckon him who taught me this art of medicine as dear to me as my parents. I will share my substance with him and relieve his necessities if required. I will look upon his offspring as my brothers and if they wish to learn medicine will teach them without fee. ..... I will prescribe such a regimen for my patients as shall, according to my ability and judgment, conduce to their benefit. I will avoid whatever is evil and unjust. ..... In innocence and in purity I will pass my life and practise my art. ..... Whatever houses I enter I will enter them for the benefit of the sick, and I will abstain from every intentional act of mischief and corruption. ..... If I see or hear in the exercise of my professional practice, or even apart from it, anything in the life of men which ought not to be spoken of abroad I will not divulge it, regarding in such case discretion as a duty. While I continue to keep this oath unviolated may it be granted to me to enjoy life and the practice of the art, held in perpetual respect by all men. If I violate it and perjure myself may the contrary be my lot."

Is it possible to conceive a finer testimony to the high standard of professional conduct aimed at in those remote days? May you and I throughout our professional lives emulate the generous and pure spirit which inspired these famous words. If in the battle of life that is before you anything that I may happen to have said to-day may help you to fight manfully and to win your way to honour and success I shall indeed be glad. "I have great confidence," says our dear old friend Wendell Holmes, "in young men who believe in themselves. ..... When a resolute young fellow steps up to the great bully, the world, and takes him boldly by the beard, he is often surprised to find it come off in his hand and that it was only tied on to scare away timid adventurers." And so, with these closing words of encouragement, I bid you one and all God speed.

PRACTICE IN AUSTRO-HUNGARY.—Notice has been given by the Austrian Minister of the Interior that after the beginning of next year the right to practise medicine will be granted to Doctors of Medicine in Austria proper only or in Hungary only. Hitherto the privilege of practice has extended throughout the empire.

DURHAM UNIVERSITY COLLEGE OF SCIENCE.—An ordinary general meeting of the governors of the Durham University College of Science was held on Oct. 3rd, the Dean of Durham, warden of the University, presiding. The balance-sheet showed that the donations had amounted to £44,552, the scholarship endowments, bequests, &c., to £7419, and loans to £32,000. With other items the total receipts on account of the College amounted to £85,707. Investments amounted to £2704, the value of ground and houses bought with the College site was £13,526, and the value of the College buildings was £59,050. There was a deficiency of £9406 on revenue account. The revenue account showed the total receipts to be £16,224, the total payments amounting to £16,453. The retiring councillors—Mr. William Cochrane, Professor Philipson, and Dr. Spence Watson—were re-elected. There were two vacancies on the council by the deaths of Dr. Charles Mitchell and Mr. John Philipson. Mr. Crawford Smith and Mr. Watson-Armstrong were elected to fill these vacancies.

Abstracts
OF
INTRODUCTORY ADDRESSES, ETC.,
DELIVERED AT THE
LONDON AND PROVINCIAL MEDICAL SCHOOLS
AT THE
Opening of the Session 1898-99.

MASON COLLEGE, BIRMINGHAM.

INTRODUCTORY ADDRESS BY PROFESSOR MICHAEL FOSTER, F.R.S., PROFESSOR OF PHYSIOLOGY IN CAMBRIDGE UNIVERSITY, ON "THE NATURE AND FUNCTION OF A UNIVERSITY."

GENTLEMEN,—So soon as I began to strive to put together a few words to speak to you on this occasion there came into my mind, not once only but again and again, the thought that Birmingham is soon to have a University of its own. I have the honour this evening to give the signal for the commencement of the winter session of medical studies. For many years in the past the medical school connected with the General Hospital and the Queen's Hospital pursued an honourable career as a provincial school of medicine. Of late years that independent school has become—may I not say happily become?—the Queen's Faculty of Medicine in the Mason University College. Soon, we hope and believe, yet another step will be taken and the teaching of medicine in Birmingham will be carried on not as the action of an isolated hospital, not as part of the work of what some would call a mere college, but as the labour of the constituent Faculty of a Midland University. Hence I have been led to consider how this step will affect medical studies here, and this consideration naturally began with the question—What is the real nature of the step? What does it mean? This, again, leads in turn to the question—What is a university? How does it differ from a college or from a school, or from any other institution devoted to learning? What are its essential features? What are the central ideas running through it which distinguish it from everything else? Many would say: "A university is a machine for granting degrees."

[There were others, Professor Foster went on to say, who thought that a university was a place dealing with all knowledge. Others thought that it was a place where all benefit by what is learned and taught without any one receiving profit for any particular line of life. To answer the question of what is a university we must consider what the original universities were. They were guilds or corporations of learned men—a number of men bound into a body for some special purpose. Inquiry was their main object, and secondly came teaching—teaching their scholars to succeed in one of three walks of life, the Church, law, or medicine. The old trade guilds had two degrees—one the apprentice, the other the master. So had the guild of learning, only it adopted special names and the apprentice became the scholar while the master (*magister*) retained the same name or else rose still higher in the scale of learning, being called "Doctor." Admission to the "degree" was only granted after "repeated and prolonged interviews" of the scholar with a troop of learned masters. Professor Foster continued:—]

"The university of old was a guild by means of which the beginner was brought under the influence of the sage; a guild in which those who knew gave of their knowledge to those who wished to learn, amid surroundings which were rich in aspirations for wider and fuller truth; a guild continually made young by the continual bringing into the fold of new members, but only such as had proved upon trial their love of knowledge and their power to grasp it. Are not these things the aim and the tokens of the university of to-day?

[Professor Foster, after urging the point that too much value should not be placed upon a degree, for it could have only a relative and not an absolute value, and advising that examinations must not be strained overmuch, proceeded:—]

Let me, however, turn aside from generalities such as the above to say a few words about the particular degrees which are special to the present occasion—degrees in medicine. I

shall, I trust, carry you with me when I say that the object of the institution of medical degrees is to select out of those who press forward to join the medical profession the men who give promise of becoming real doctors. It is a means of marking those who may be expected to show by their subsequent careers that they possess the power to heal the sick. When in the early days of the universities the academic rulers prescribed certain studies for those who sought to be doctors of medicine and insisted on those studies being diligently and successfully pursued, they did so under the conviction that each and all of these studies gave power to the arm of the doctor in his struggle with disease. As I have said, they believed that what they taught was useful and necessary for practical life. The degree they bestowed was undoubtedly honourable, but they never looked upon it as ornamental. They gave the doctor a special robe that men seeing it might know at once through what studious labours the wearer had passed and how he thereby differed from other men. They never thought of it or of the degree as a thing to be flaunted, for pride's sake, in the face of the people. Let us follow their example. Let us, as they thought they did—they may have been mistaken in their details, but this does not detract from the value of their purpose—see to it, that the studies which are demanded of the doctor are those which are calculated to fit him in the best possible way for his task in life. Now, success in a medical career, and that is the real proof of the possession of power to heal or to relieve the sick, is contingent on many things, on the concurrence of many diverse qualities. Of these some, and those by no means unimportant, cannot be taught by any professor, cannot be tested beforehand in any school; of such, the world is the only schoolmaster and life itself the only examiner. One need not live long to have come across men brimful of knowledge, quick to see, sure in judgment, and nimble of hand, who yet have failed to gain power over patients, because they have lacked something. At the very best any test which a university can apply is a partial one, and is, viewed as a guarantee that the patient will find what he expects, in many ways imperfect.

[This being so, went on Professor Foster, our tests should be of such a kind as to anticipate as far as possible the judgment of the world. There was so much to be learned nowadays that some choice must be made in the things which he who sets out to be a doctor is bidden to learn. He continued:—]

An examination for a medical degree, as I have asserted, is or ought to be a test whether the examinee gives adequate promise of being able to cure or relieve the sick, whether he possesses the knowledge and ability to apply the teachings of science to the removal, mitigation, or prevention of disease. It is not to be used, as some other examinations are or may be, to test a man's mental agility and alertness, his power of rapid and correct expression, his coolness and presence of mind amid difficulties. It ought to be directed solely to appraising his professional skill; simply this, all else is irrelevant. Now I can quite conceive that this might be satisfactorily accomplished by a final clinical examination—a prolonged and searching examination it may be, but one essentially clinical, or at least professional in nature. It would, I believe, be possible to conduct such an examination in such a way that the candidate must show by his attitude towards clinical problems whether he had rightly grasped pathological truths, and this in turn in like manner would show how far he had laid hold of pathology and therefore of chemistry and physics. Our justification for insisting on the study of these preliminary sciences is that a knowledge of them leads up to, being the basis of, clinical insight and skill. If this be so the effects of those studies ought to be recognisable at the end. If our system of training be really a sound one, if at each step an indelible stamp is left on the learner, then at the end we ought to be able to trace backwards the road along which he has trod. I say I conceive it possible to test the fitness of the candidate at one step by one adequate final test. But there are obvious reasons, on which I need not now dwell—reasons pertaining to the economy of time, to the advantages of more continually watching over the wayward student and of early estimating the hopeless ones—in favour of the plan of arranging that the degree should be the final goal of successive examinations at the several stages of study. It will be the duty of the authorities of the new University, when it comes into being, to prepare regulations for its medical as for its other degrees. It is not for me, and even if it were so this is not the occasion, to dwell on the details of the regulations which ought to be adopted. But perhaps I may be allowed to make some general suggestions, to give utterance to some reflections which my experience, now not wholly brief, has borne in upon me.

As I said just now, it has already become impossible to insist by the tests of an examination on the student gaining a knowledge of everything which has a bearing—even a very direct bearing—on the medical art. We must not attempt to make the field of examination conterminous with the field of knowledge; we must restrict the field within narrower limits, and as years go on and science grows more and more the restriction must become more and more decided. The wise man will look ahead and strive not to frame regulations which within a relatively short time circumstances will compel him to mend. Looking ahead, we may be sure that our efforts at restriction can only be conducted along certain lines. Far away in the future it will remain as true as it is to-day, and perhaps appear even more clear, that sound practices must rest on a wise pathology; this in turn on an enlightened biology; this, again, on a firm basis of chemistry and physics. It is not possible to-day, nor will it ever be possible in the future, to lighten the burden of the medical student by throwing out any one of the sciences which in ascending series form the basis of the science of medicine; if you attempt to draw any one of these sciences out and away from among its fellows the educational edifice falls to pieces. Yet it is already absolutely impossible, in view of the expenditure of time and money, to say nothing of brain capacity, that each student on his way to become a doctor should become, in turn, a physicist, a chemist, an anatomist, a physiologist, and even a pathologist. A cutting away must be done within each science, and as time goes on the pruning knife must be used with greater and greater effect. How shall the cutting away be done? There is, I venture, to think, a bad way and a good way.

One way is to pass in review each of the sciences and pick out the bits, the separate facts, and even the disjointed laws or doctrines which are known at the present time to be used in the construction of medical science or in the applications of medical art. We might, for instance, ranging over the wide and varied field of physical science, choose the particular bits—bits of mechanics, bits of hydraulics, bits of electricity, bits of optics, and the like—which the teacher to-day in physiology or in pathology takes for granted as known and acknowledged when he is expounding the solution of a physiological or pathological problem, or which are called into play in the sick room as part of, or guide to, some therapeutic means. And so with the other sciences. We could thus undoubtedly lighten the overloaded medical back. But with what result? I will say nothing of the task of getting these disjointed fragments, held together by no logical ties, deprived of all suggestive connexions, securely lodged in the learner's head—a task of great and disheartening hardness, a task, moreover, which would probably through its repellent difficulties be found to consume well-nigh all the time and energy which the proposed restriction was supposed to save. It will be enough, I cannot help thinking, if I ask the question, Who is to be the authority to decide which bits of this and that science are pertinent to medicine? Who is to pick them out and frame them into a schedule? It will be enough at least if I add the reflection that when we have gathered these various bits together we find them a shifting mass. Each science is for ever changing; new facts are being discovered, new truths are coming to the light. That which to-day is unknown, or if known would be rejected as having no relation to medicine by the builders of a schedule such as I am imagining, may to-morrow become the corner-stone of new medical truths. Were such a schedule in existence few years would pass before the man in active practice would be heard lamenting his misdirected education in which while he was taught much which he now finds to give him no help in his daily life that which he would now find most useful even though then known was left untaught. Moreover, the wheels of the academic machinery which enacts and changes regulations move slowly with much friction. Again and again it would be found that medical theory, and therefore medical practice, was being powerfully swayed by some bit of chemistry or physiology long before the academic authorities had time to insert it in their schedule. Am I not right in saying that this is a bad way?

But there is another way. From time to time the man of

science is, according to his mood, pained or amused at a man of letters of repute or even of eminence—a poet, a historian, or a novelist—delivering himself upon a difficult, disputed question of science. The man of letters may be acute and logical, may have diligently studied the special facts bearing on the problem; and yet to the man of science his conclusions merely raise a smile or a sigh: they are so preposterous and obviously wrong that they will not bear for a moment the test of rigid scientific scrutiny. So again, within a narrower circle the physicist or the chemist from time to time flounders conspicuously when he attempts to solve biological problems; the biologist when he pronounces judgment on physical or chemical theories; and either of them when he delivers himself of his views on questions of abstract philosophy. And that though each in his treatment of the subject may show talent, acumen, and knowledge. There have been instances to the contrary, but it is this which often happens. A master in one branch of learning, if he attempts to go beyond the tether of his accustomed thinking, is apt to expose himself to defeat at the hands of a mere disciple. For each kind of learning, each branch of science, has what may be called its own way of thinking. Different phenomena observed by different methods, different ideas born in different ways, different devices for overcoming different obstacles, all these go to create different attitudes of mind and different modes of laying hold of truth. Not until the mind has been accustomed to watching the phenomena which constitute the subject of a branch of science, not until have been learnt by practice the ways in which in the past the problems presented by these phenomena have been solved, is it ripe for the attack on problems yet to be solved or for critical judgment on solutions of those problems offered by others. This is at once the only real and the royal road to learning a science, getting to be able to think in it, to grasp the ideas which form the body of it in such a way as to be able if opportunity offers to add to it new consonant ideas, or at least to judge truly new ideas offered as being so consonant. This is the kind of learning which the doctor wants. His life is, on one side of it, one prolonged investigation—not a continued inquiry into one homogeneous problem, but a repetition of attempts to solve the multitude of diverse problems presented to him day by day. His success, on this side of his life at least, will depend on his power of right thinking; and his power of clinical thinking is in part the outcome of his being trained to think in other things. He needs to be trained to think in physics and in chemistry in order that he may use these sciences aright when he attempts to study biological or physiological problems. He needs to be trained to think in physiology in order that he may think aright in pathology, and so, with his feet set in the right path, may in his future life be able, through the instincts as it were of a well-ordered mind, to recognise swiftly the value of the right views and the worthlessness of the wrong views which from time to time will be offered to him touching the nature and causes of disease. It is not the facts of physics, of chemistry, and of physiology which form the most important part of the medical man's training during his novitiate of study (the facts of anatomy stand on quite a different footing); it is the right way of viewing these facts, the right way of thinking about them, which is the essential need. If the mind be put in the right way the facts can be gathered up and put in their proper place at any time, even in late after-life. But the mind can be fixed aright only in the early years of training.

Here I think I hear some one say: "I thought you were proposing to lighten the burdens of the medical student; surely it is not a blessing but the reverse which, if I rightly understand you, you are now offering to him. We are groaning under the heavy burden of having to compel the student to study those sciences auxiliary to medicine; we hitherto have been content that he should know; you are proposing that he should not only know but understand. Do you call this a help?" Yes, much help every way, but only on two conditions touching the way in which the affairs of a university are conducted. The first condition is that the authorities to whom is entrusted the appointment of the teacher, professor—call him what you will—of each of these sciences, should recognise in the selection of the holder and in the award of the emoluments of the chair, and that the teacher himself should recognise, that the office is one not of teaching only, not of didactic exposition only, but of learning, of inquiry and research. I know very well that the gift of investigation and the gift of facile exposition do not always—possibly do not often—go hand in hand. But the power of thinking in a science on which I have been dwelling is not taken in as drops falling softly from the lips of the teacher into the open mouths of the passively recipient hearer; it has to be gained by the exertions of the learner and largely by active work in the laboratory, and I never heard of anyone having in him the true spirit of inquiry who in the quiet studies of the laboratory failed to carry his pupils with him onward from truth to truth, however sorry a figure he might cut when he attempted in a formal manner to thump the professorial pulpit. On the other hand, if the spirit of inquiry be lacking an exposition clear as crystal, aided by elaborate diagrams or a projection lantern, while it seems to be wholly luminous may leave the mind of the hearer really dark. The art of teaching in the true sense of the word is not the art of pouring into empty vessels; it is the art of awakening latent powers, the art of nursing that feeble infant the desire to know, until, growing strong in limb, it is able to walk alone and go on its own way. The only teacher who can truly teach is one who is himself bent on going forward, to whom each bit of new knowledge which comes before him is not something to be stuck in its proper place in the catalogue of things known, but a stepping-stone from which to make a new stride. The second condition is that the tests, trials, examinations—call them what you will—by which the progress of the student is measured should be directed to appraising his intellectual growth, not his accumulated knowledge; to determining how far he has got on the road, not the amount of luggage he has gathered on the way. This cannot be achieved solely by means of one or two trials of written questions and answers, even with the aid of a string of manipulative puzzles, often called a practical examination. By hypothesis we are striving to lighten the burdens of the medical student; we are desiring to find out the minimum of knowledge of any one science, say physics, possessing which he may be permitted to pass on to the study of the other sciences based on that. I am arguing that it will be enough if we can be assured that he has learnt to think in physics, that he has grasped the methods of physical inquiry to such an extent that when in some other science—in pathology, for instance—a problem is treated by physical methods he can comprehend that treatment. No stranger examiner, even though he had the skill of an angel, could gain that assurance by merely shooting questions at the student on one or two formal occasions. One person only is in a position to form a judgment on the matter, the teacher who has really taught the student, who has brought him on his way not by formal lectures only, useful as these are in their proper place, but by frequent intercourse in the laboratory, watching him at his repeated exercises, sounding again and again by quiet talks the stream of his thoughts. He alone is in a position to say that which we are supposing is all that need be said—that such and such an one understands what he has been taught and may now safely pass on to other studies. If it be feared that such a judgment is a responsibility too great to be laid on the shoulders of one person, seeing how personal predilections or other motives might come in to warp it (though in a well-ordered mind and a well-ordered university loyalty to the science on the one hand and to the university on the other ought to be a safeguard strong enough to render such a fear of little moment), let his results be checked by someone else and the student's fitness be declared by the mouth of two witnesses of his work. But, so far as I can see, it is only by taking the teacher into full confidence and making large use of him that we can hope so to adjust the increasing demands of the sciences auxiliary to medicine to the fixed and stationary capacities and opportunities of the student as to train up men in such a way that their purely scientific studies shall be wholly a help to, and not at all a drag upon, their strictly professional learning.

Here it may be said: "This proposal to lessen in the case of the medical student the demands on the auxiliary sciences will bear hard upon the teacher. It lessens the time to be given up to each science and so virtually lessens the number of the teacher's students and his fees, while at the same time it increases the labour which he spends on each student; moreover, it cuts away, as far as the medical student is concerned, the higher teaching of science. The

life of the teacher is a hard struggle as it is. If the artificial props by which he is supported be taken away he will fall to the ground." Here comes in the idea of the university. A university is not an educational institution directed by the principle of "payment on results." It does not set itself up as a rival to a system of classes which proposes at the least expenditure of time, money, and, it may be added, of brains to drive a head through the same narrow gateway of this or that formal examination. The one reason for its existence is the encouragement of learning, and that irrespectively of the immediate benefits of new truths. It is because it works for ends the good of which may not be seen at once that it cannot be conducted as a "paying concern." If it is to flourish it must not be expected to live from hand to mouth, its livelihood must be assured to it by the gifts of its friends or, failing that, by the aid of the State. As the university looks to be treated by the world, so it must treat those who do its work. Since it lives for the advancement of knowledge, it must see to it that the men who are for the time being its flesh and bones are placed in circumstances as far as possible favourable for their doing their best to push forward the limits of the known. Part of these men's work is, as we have seen, available for immediate use, and as such may be duly appraised; but the value of much of it lies hidden in the future. It is just this uncertain moiety which needs the most kindly care. The worth of a university is to be measured not alone by the number and quality of the graduates which it turns out into the world, but also, and even more so, by the number and quality of the new truths which go out into the world from its laboratories and lecture rooms; by its work of research will it in the end be judged. Research grows on leisure and quiet; only in rare cases will it flourish in the midst of turmoil and with the wolf crying at the door. By all means, as I have already urged, let teaching and learning stand side by side; bid the teacher investigate and the investigator teach; but let the teaching be so ordered and so rewarded that the teacher has ample time and repose for his research, and, content with his line, is placed beyond the temptation of giving up to the search for gold the time and energy which ought to be spent in the pursuit of truth.

You here, in Birmingham, have a great opportunity before you. You are not trammelled by historic bonds, or by vested interests, or by ties of the State. You are free to mould your new University as your judgment directs. May I bid you not to copy slavishly the outward lines of any model, old or new? Do not attempt to wear the clothes of the old universities, the fashion of which has been determined by a past which you have not. Do not be led to think that when you have spread a net of examinations you have built a lasting house. Let the spirit of inquiry be your guiding spirit; you shall find that as you follow it other things will come in its wake. If your teachers be men busy garnering new truths, their pupils will gain real knowledge. With such teachers and such pupils you may safely throw aside many of the present devices, at once irksome and insufficient, for testing the work of the scholar. You will be able to afford to make your degrees at once efficient and economical, inasmuch as they will be remunerative not merely by the possession of them, but in the very getting of them. If you do this it will be strange if you do not reap the reward not of honour alone, but also of material success.

I fear that I may have been preaching heresy and that in many things which I have said I have been very bold, but I have been encouraged to think that I might speak freely in a place which in times past and in other things has shown that it is not afraid of leading the way. One word more and I have done. I have been speaking this evening chiefly of matters medical and have been urging the claims of scientific development, but I would not wish to be thought the advocate of science alone. Though it is true that the term "university" does not mean the care of universal knowledge it is equally true that the full good which a university may gain cannot be gained if it narrows itself to one line or even to a few lines of study. For each branch of learning nothing is so good as to be continually in touch with other branches. The ideal university is that to which whosoever comes finds what he wants to learn, whatever it be. May I hope that your university, when it comes, will draw near to the ideal, that it will set itself to nurse every kind of learning, disdaining no kind of knowledge because it seems useless, being afraid of no kind of knowledge because it is openly, even glaringly, useful.

ST. GEORGE'S HOSPITAL.

INTRODUCTORY ADDRESS BY MR. G. R. TURNER, F.R.C.S. ENG., SURGEON TO THE HOSPITAL, ON "THE VALUE OF MEDICAL WORK TO THE COMMUNITY AND ITS INADEQUATE PECUNIARY REWARD."

AFTER some introductory remarks, in which allusion was made to the deaths of Dr. Wadham and Mr. Henry Lee of the consulting staff, and that of Dr. Leonard Remfry of the acting staff, of St. George's Hospital, it was pointed out that education for the medical profession demanded now an industry on the part of the conscientious student greater, perhaps, than that required by any other vocation but which was well repaid by the greater interest of the study. "Walking the hospitals" necessitated of the modern student the attendance on more than 1000 lectures and demonstrations during five years quite apart from his purely hospital work. In a review of the past St. George's Hospital year reference was made to the recently published "Life of Sir Benjamin Brodie," an old surgeon of the hospital, by Mr. Holmes, the treasurer. The extreme value of a medical treasurer who had already spent many years of his life on the honorary staff was insisted upon and for the benefit of hospitals such appointments should be more frequently seen. A review of the athletic achievements of the St. George's Hospital students for the past twenty-five years showed of what stuff the modern medical student was made. This comparatively small school had produced amateur champions in running, rowing, boxing, cycling, cricketers who had played for their counties, many university oarsmen and runners, international football players, a lawn-tennis champion, and authors of books on mountaineering, skating and cycling. More than natural aptitude and physical development is wanted for such athletic success; self-denial, self-restraint, perseverance, and patience must accompany these—qualities the public are not wont to credit the medical student in his lighter hours with, but which he possesses to a marked degree. His work, too, has a distinct pecuniary value; it saves his hospital the employment of extra staff and nurses and in this work he may have opportunities of showing disregard of danger, devotion to duty, and self-sacrifice. The courage of the medical man is tested without accompaniment of the skirl of the bagpipe or the beat of drum, but it may equal that of the soldier. In his struggle with disease no publicity awaits the wounds he may receive, his life he may lay down in doing his duty, and those near and dear to him are too often left in poverty with no grateful country to provide for them. Save to a very few honoured with the rank Sir Gorgius Midas accepted with indignation as that given to a successful sawbones there comes no rank, no title, no distinction to mark the experienced veteran from the latest recruit. The medical student, so amusingly and graphically portrayed by Dickens and Thackeray, has too long been taken by the public to be typical of a low fastness, uneducated, unclean, redeemed only by the saving grace of humour and a love of practical jokes. The worst types of a bygone age, when anyone who chose could call himself a medical student, have led in the past to this conception of him. To-day students are largely recruited from public school and university men. At Cambridge alone in the last ten years 9437 undergraduates have matriculated. No less than 1253 are registered students of medicine—more than 13·2 per cent., nearly one in every seven—a splendid tribute this to the work done by the late Sir George Humphry. At Oxford in nine years but 212 undergraduates out of 7330 have elected to follow medicine. This number, now that the claims of science are to be more recognised there, will doubtless be materially increased. The behaviour of the 3000 London medical students compares not unfavourably with that of the admittedly well-behaved undergraduates of Oxford and Cambridge who have less temptation and more restraint. Not only Dickens and Thackeray have been hard on the medical student, but Tennyson in his poem, "In the Children's Hospital," has been unfair to surgery. Thousands have read the poem and pictured the surgeon; very few are aware that Tennyson expressed to the late Sir Andrew Clark his regret that he ever wrote it. The writings of Molière, like those of Dickens, Thackeray, and Tennyson, live after him, and careless readers may forget that the medical men whose pretentious ignorance he ridicules were those of 240 years ago, who had the ignorant confidence of empiricism combined with a fatal activity of treatment now happily absent. To live down the writings of such masters of literature would have been a hard task for any

class of students for any profession; the medical one is now very fit for any one with high ideals, good health, good intellect, and a capacity for hard work. It is as philanthropic as the clerical profession, but receives less State and social recognition. Surely the fascination of scientific study should attract more of the intelligent well-to-do than it does. By the triumphs of preventive medicine, hygiene, and sanitary science the overstocked medical profession is rightly and honourably doing all it can to prevent work for itself. This unselfish action is too often misunderstood and medical men are said to "have fads" and are suspected of furthering instead of standing in the way of their own interests. The profession is infested by quacks, forestalled by prescribing chemists, sweated by clubs and medical aid associations, and the hospitals which are so largely gratuitously served by its members lend themselves, however careful may be their supervision, to an abuse which diverts many a fee from the struggling practitioner. In London alone nearly 17,000 maternity cases are treated at the general hospitals, more than 1,200,000 out-patients and casualty cases and nearly 70,000 in-patients. Here must be an enormous number of unsuitable cases for charity at the expense of the involuntary philanthropist, the general practitioner. No wonder that the building of a hospital in a new locality is regarded by him with very mixed feelings. We of the profession know these things, for are they not written every week in our chronicles? Has not everyone with experience been a personal sufferer? The public, however, who subscribe to the various Hospital Saturdays and Sundays, to royal, emergency, and other funds; the public who by their liberality and legacies have hitherto prevented the institution of State-aided hospitals and their inmates being a burden on the rates—that liberal public which supports by voluntary contributions 23,204 beds in the 716 hospitals of the British Isles on which more than one and a half millions of pounds sterling (£1,629,114) is spent annually, is it aware of what "the doctors" do? Not only are there 716 hospitals, but dispensaries and convalescent homes swell the number to 1155 institutions, spending nearly three millions of pounds a year (£2,825,376).

The immortal Darwin, by means of the brightness of his genius and patient research, first threw light on the dark places of the earthworm, showed how ceaseless is the good, silent work that the lowly, humble creature does, how greatly vegetable and animal life are indebted to it. Sir Henry Burdett, to whose great statistical work on hospitals and charities I am indebted for the figures I have quoted, has made himself a benefactor to the medical profession by the mere enumeration of its ill-rewarded labours in all the centres, in all the out-of-the-way dark corners of the United Kingdom, wherever there is suffering, wherever there is poverty or distress, wherever, in short, there must be medical charity. He has done much by compiling statistics to tell of the ubiquity of medical gratuitous labour, the unlimited potentiality of the poor and others who are not poor, and should be ashamed to pauperise themselves to command the best advice in their neighbourhood. In London alone there are, I find, 7540 hospital beds and 14,597 in Poor-law infirmaries, making 22,137 beds for the poor man and his family. Something has been done by Sir Henry Burdett to show how the medical labourer is rewarded, but statistical tables on this last point are almost necessarily absent. I have made inquiries at the various general hospitals in London, numbering some 24, and having an annual expenditure of £487,248—nearly half a million. Of this amount I find that there is paid to medical men, resident and non-resident—there being in all some 165 resident and 466 non-resident appointments—a total sum of under £13,000, that is to say, 2·66, a little more than 2½ per cent., of the whole amount. An analysis of these payments at hospitals with medical schools attached to them shows that there are 256 unpaid and 170 paid medical officers. Were it not that one institution pays every one of its 64 officers this proportion of the (inadequately) paid to the unpaid would be much less; thus 11 hospitals have 256 unpaid officers and they pay only 106. They expend £6890 annually in doing this at an average of £65 to each paid officer. Curiously enough, the average of payment at St. Bartholomew's Hospital, paying £4188 to its 64 officers, is also just over £65 a head; but there all are paid something. The payment even when existing is admittedly inadequate; hard work of from three to six hours a day requiring a highly qualified, trained, skilled man to do it is rewarded perhaps by £50 a year—such, for instance, is the work of a registrar. Only 4 hospitals pay anything to their visiting staff. The other 8 hospitals pay only 38 out of their 240 officers. The total expenditure of these hospitals with their medical schools is £392,488 per annum—£11,078 pays their 426 medical officers. Probably hospitals with no schools attached are even less generous to their medical staff. The truss and surgical aid societies expend £20,492, paying their medical officers as far as I have been able to ascertain £850. I do not say that it is wrong that so little should be given for so much—that hospitals are so literally *medical* charities—but I do say without fear of contradiction that such pecuniary facts as I have collected are not generally known by the public and that were they known and taken as a type of what our profession—the only one save the clerical profession that habitually and constantly gives its services for practically nothing—does, I say that that profession would be more widely respected, more esteemed, more honoured, and have more social consideration shown to it than it has at present. Those in authority and power might possibly not only compliment us on our noble calling, but by occasionally actually ennobling our really scientific leaders give a bench of bishops and distinguished law lords suitable companions in that Upper House where now Lord Lister sits alone. Who could be a more worthy representative and more typical of the profession at its best than this man, who has already by his practical application of the discoveries of science restored the health of more people and saved more lives than the greatest warrior lord of any time has ever crippled or destroyed?

These pecuniary facts are not generally known by the subscribing public nor is the enormous private charity of even the poorest general practitioner. Hospital service is more onerous, demands more time, and is not now indirectly paid for as much as formerly, nor is there much profit to the teacher from medical education. So-called "pay hospitals" are too often patronised by the comparatively rich and the pay is diverted from the medical man. This state of things is not confined to England. Dr. Wiggin of New York, in a paper on the existing abuse of medical charity, considers that it is established that not far from 50 per cent. of all applicants for free medical relief in the larger cities of America are not persons who require it. The cult of altruism is a luxury getting beyond the means of the ordinary member of the medical profession, and well might the medical man with an execution in prospect paraphrase Madame Roland and say: "O Charity, what things are done in thy name." There has come a time when this charity is no longer requested but demanded of him, sometimes by locally powerful organisations, such as clubs and friendly societies. It is his duty to his medical posterity to resist this and to see that an abuse admitted by all is not allowed to spread.

How would the great profession of the law regard the erection of suitable law-courts by public subscription all over the country, the payment of all engaged therein save solicitors, counsel, and judges, the unpaid to wait for years before being allowed to practise to show their capacity, being liable if thought or found incapable to lose their reputation and to be cast in damages to be paid to the pauper and other litigants, the reward of the successful few being a private practice elsewhere, and even those who succeeded to still give their services in the gratuitous courts? What is done all over the kingdom by the medical profession, not by any means a rich body of men, and which I am far from saying is wrongly done by them, seems Gilbertian and grotesque when applied to any other profession, save perhaps only the clerical. In the latter, however, there are Lord Archbishops, one of whom takes precedence of all but the blood royal, there are lawn-sleeved bishops in the Lords, there are plums and palaces, and the clergyman, poor though his stipend and emoluments may be, humble, too, perhaps his origin, is received into rural and city society because of his profession, where his brother philanthropist, the modern missionary, the medical man, is often excluded because of his.

The medical profession must be militant also and militant not only against disease. Too long has sufferance been the badge of all our tribe. The world is governed by sentiment, not by science, and sentiment, her appetite growing by what she feeds upon, demands rather than asks for gratuitous scientific service. Many laymen resemble the old lady who was so much moved by the sermon that she borrowed from her neighbour a sovereign, not perhaps ever returned, to put into the plate which was presented for her charity.

The profession has too long been lending that sovereign and on too many days of the week, the old lady partaking meanwhile of the satisfaction born of good works, the good work of using the services of another.

So-called hospital scandals, where sometimes the committee and sometimes the medical officers have erred, and sometimes erred together, usually seem to end in resignation of the medical and the continuance in office of the lay element; the medical scapegoat is brought to the door of the tabernacle, has the sins of the people laid on him, and is sent away with his burden into the wilderness. Would this scapegoat be found so often in our ranks were they firmer, more animated by *esprit de corps*, more determined to stand shoulder to shoulder and to resist to the last? It is a great thing and conduces to peace to be known to be ready, if necessary, with the pistol. *Noli me tangere* should sometimes be a medical motto, and any one of us or any body of us justly struggling for some right should be able to be sure that whatever the result there will be no underselling, no supplanting by those from whom moral support at least should come—the medical profession. That this is not so is one of the sources of our weakness, one of the reasons of the rarity of successful resistance, one of our obvious faults. Such resistance should not be limited to those immediately concerned, but should be supported, led, and if need be initiated by the well-to-do and prosperous of a profession too often and in too many places unable to assert itself because of its very numbers, its keen competition, and its poverty induced thereby.

The methods and manners of trade unions are to be deprecated. The profession is admittedly something nobler than a trade; but medical charity has outgrown its proper limits and its further extension and multiplication will kill what little independence remains in a sorely tried profession. We must all be in some sense dependent; none can be absolutely free; but there is a servile dependence ignoble and dishonourable as there is a dependence which is honourable, right, and worthy of the labourer, as he himself is worthy of his hire; a dependence worthy of a profession at all times and in all places ready to give its services to the really poor and needy in all walks and ranks of life; a dependence which will still allow of the maintenance of that which should belong to all of us and is the due of each member of an honourable calling—self-respect.

ST. MARY'S HOSPITAL.

INTRODUCTORY ADDRESS BY DR. H. A. CALEY, PHYSICIAN TO OUT-PATIENTS AT THE HOSPITAL, ON "PREVENTION IN MEDICINE: THE NEED FOR A FORWARD MOVEMENT."

GENTLEMEN,—Instead of more abstract advice I invite your attention to-day to one single principle, which by virtue of its intrinsic importance as a moulding force and its far-reaching beneficial results in practical operation has had so much to do with the triumphs of medicine and surgery. I refer to the principle of Prevention. My chief aim is to emphasise the need for a forward movement in applying this principle of prevention, and by way of illustration I shall, as far as possible, refer to matters of current interest or which have attracted attention during the past few months. Our knowledge of the causation and processes of disease is to-day such as it has never been before, hence never was there a time more opportune than the present for increased attention to this subject of preventive medicine—using the term in its most comprehensive sense. The occasion is likewise opportune in that the formal opening of the Winter Session is one of the very few occasions upon which we have the opportunity of expressing our views in the presence of representatives of the non-medical public, without whose intelligent and energetic coöperation this great principle can never have free course or produce its full results. I anticipate the criticism that this subject would be more appropriate for an address introductory to practice than for an address introductory to the student's medical curriculum—for the fifth-year student rather than the first-year student. The fact remains that there is but one such address, and it is my firm conviction that the earlier the student appreciates the responsibilities which the practice of medicine involves, and the range of influence which may one day be his, the more intense and earnest will be his interest in the successive phases of that course of study and experience which are designed to fit him for a life-long conflict with disease and death.

Owing to the restricted and specialised sense in which preventive medicine is frequently regarded I fear that this aspect of medical work does not receive due attention. To cope with preventable disease is regarded too much as the business of those who devote themselves to public health work and too little as the concern of every practitioner of medicine, still less as that of the community. It is not, however, by the foresight and expert knowledge of the few, but by the energetic coöperation of the many, acting under the guidance of expert knowledge, that a decisive blow can be struck against the forces of preventable disease. Whilst we look for and work for fuller light and more perfect knowledge it is unquestionably the fact that vast results in the prevention of disease are within reach, if we could but persuade men to act up to the light they already possess. In the popular conception of preventive medicine in this country no disease occupies a more prominent place than typhoid fever. It is a matter of common knowledge that sudden epidemic outbreaks of typhoid fever are most commonly due to water-borne infection, and next most commonly to milk-borne infection, and that consequently the surest means of prevention against such outbreaks is purity of water-supply and of milk-supply, whether that purity be due to absolute purity of source or be induced by efficient sterilisation.

On the basis of these simple facts much has been done to prevent epidemic outbreaks of this disease; how much yet remains to be done the events of the last twelve months can testify. Epidemics such as those which have so recently involved the sacrifice of hundreds of lives, incalculable suffering, and great material loss are essentially preventable if local authorities, communities, and individuals would but do their duty in the sanitary sense—a high and costly standard of duty it may be, attainable it certainly is. Whilst, however, we can speak confidently of purity of water-supply and of milk-supply combined with efficient sanitation as certain preventives of most epidemic outbreaks, we have to recognise that the origin and therefore the prevention of some of the comparatively isolated cases, of limited and recurrent outbreaks, or of the more or less persistent prevalence of the disease in certain localities, is by no means so clear. To Sir William Broadbent, in the first instance, we owe the explanation of the origin of some of these cases—conveyance of typhoid infection by specifically contaminated oysters, and the relation of shellfish to typhoid fever infection has rightly attracted much attention. But there are in this country districts, towns, and even dwellings where enteric fever repeatedly occurs or is rarely entirely absent. During the past year evidence has been accumulating in favour of the view that organically polluted soil by favouring the persistence in more or less active form of the typhoid organism has much to do with the tenacity of typhoid fever in such localities—a view to which Sir Richard Thorne gives prominence in the last report of the Medical Department of the Local Government Board. The researches recently undertaken by Dr. Sidney Martin, at the instance of Sir Richard Thorne, certainly demonstrate that the condition of the soil is of prime importance in modifying the vegetative activity of the bacillus typhosus. Dr. Martin finds that in certain samples of organically polluted soil the bacillus is capable, not only of retaining its vitality for as long a period as seven or nine months, but also of multiplying and permeating the adjacent soil, whereas with virgin soils no sign of vitality could be discovered as the result of testings 14, 20, and 23 days after inoculation. These and other experimental observations warrant the inference that "whilst one soil and set of circumstances are highly favourable to the vitality and propagation of the typhoid bacillus, another soil and set of circumstances are rapidly destructive to it." Striking collateral evidence which tells in the same direction is afforded by a study of the topographical distribution of typhoid fever. It is remarkable that whilst the disease has been undergoing enormous diminution in this country, the areas of both its maximum and minimum incidences have remained practically the same during the 20 years 1871–90, and further that much of the persistence of the disease is associated with those sanitary conditions which involve organic pollution of the soil.

The bearing of such considerations as these on prophylaxis is obvious, having reference not so much to

direct channels of infection as to the conditions of environment which are most favourable to the vitality and multiplication of the organism of the disease. It is of interest to note in passing that energetic preventive measures may prove their efficacy long before their precise *modus operandi* is known. The introduction of impermeable pavings in yards about small cottages and tenement properties in towns and the prevention of soil contamination were measures of proved efficacy before any such explanation as that now suggested was forthcoming. My last words on the subject are to direct attention to the necessity for more reliable and rigid disinfection in the management of individual cases of typhoid fever. It has for a long time past appeared to me that there is very great danger from partial or perfunctory disinfection, and quite recently attention has been directed to the subject by Dr. Franklin Parsons of the Local Government Board and also by Dr. Robertson, medical officer of health of Sheffield.

In face of the officially expressed opinion of the medical adviser of the Local Government Board that the death-rate of this "typically preventable disease" would seem to be coming to a standstill we are bound to advocate a fresh forward movement towards the eradication of the disease. To be successful it must be comprehensive and take account, not only of infected water, milk, and other articles of diet, but also of factors of another kind, the influence of soil and other circumstances on the vitality and multiplication of the typhoid organism, the dangers of lax disinfection, and, under certain circumstances, of infected dust also. Did time permit we might refer to what has been accomplished in the prevention of cholera or to the vast and practically new field for preventive medicine which the study of tropical diseases is opening out. What possibilities as to the prophylaxis of malaria—that great barrier to civilisation and colonisation—are suggested by Major Ross's recent observations on the relation of the mosquito to the malarial parasite.

Preventive medicine in the field of tropical disease is of national importance to this country with its world-wide empire, and the recent decision of the Colonial Office to send out in conjunction with the Royal Society a Commission to investigate the dissemination and prevalence of malaria shows that this is now appreciated in the highest quarters. On this occasion it is impossible not to digress for a moment to express our appreciation of what foresight and efficient organisation have accomplished in the medical arrangements of the Soudan campaign, recently so brilliantly concluded. The newly constituted Royal Army Medical Corps had not long to wait before it received its baptism of fire at the battle of Khartoum, and I feel sure that I express the unanimous opinion of my colleagues in saying that we hope that many of our present students will elect to serve their Queen and country in the Royal Army Medical Corps as well as in the Naval and Indian Medical Services. Since October of last year the whole aspect of affairs in regard to the Medical Department of Her Majesty's army has changed, thanks to the Marquis of Lansdowne and those associated with him in this great reform. There is now every reason why some of the best of our students—the best all round men—should be proud to serve in the Royal Army Medical Corps.

To return, if much yet remains to be done to prevent typhoid and other infectious fevers, what shall be said of that essentially preventable but far more disastrous disease, tuberculosis, which is still allowed to a large extent to run riot in our midst? So long as phthisis was regarded as "constitutional," due to a special diathesis, as an hereditary disease, or among the misfortunes incidental to particular climatic conditions, an attitude of hopeless indifference as to its prevalence was perhaps intelligible. But with the knowledge that tuberculosis in its varied forms and diverse manifestations is a specific and infective disease—i.e., that it cannot arise *de novo* or from accidental causes, but only from the infection of and development within the body of the specific organism of the disease—a policy of inaction is indefensible and active measures for combating its prevalence are imperative. Long before Koch's memorable discovery of the bacillus tuberculosis in 1882 far-seeing workers in preventive medicine had initiated hygienic measures of the utmost importance which have done much to reduce the mortality from phthisis in this country. During the last fifty years the deaths from all forms of tuberculosis have diminished by about 40 per cent. and the death-rate from tuberculosis of the lungs alone much more than that; but when it is remembered that the number of deaths per annum due to various forms of tuberculosis is between 50,000 and 60,000 the necessity for grappling with this problem is clear.

That further advance is called for in the direction of improved general hygiene is evident not only when we consider the substantial successes already secured, but equally so in view of the established fact that the incidence of human tuberculosis is intimately connected with insufficient or impure air, deficient sunlight, overcrowding, insanitary houses, damp subsoil, and other hygienic defects—conditions which are especially to be found in densely populated cities. Much has of recent years been done by owners of property and employers of labour to improve the conditions of life for those of the lower classes, much more might have been done had not avarice been at times allowed to stifle philanthropy. I cannot say that I agree with the opinion expressed by some that the limit of progress in the direction of improved hygiene has been nearly reached, but I do say most emphatically that a campaign for the repression of tuberculosis will not meet with success unless the attack is developed and pushed forward in other directions. In my judgment, one great bar to progress at the present time is the inadequate recognition of the essentially infective nature of tuberculosis. Not that tuberculosis is, in the popular sense of the word, infectious, so that those who come in contact with the victims of phthisis are to be in dread of contracting the disease, but infective in the sense that the disease cannot exist in the absence of the specific organism of the disease, however strong the predisposition to it may be. The first step in advance is the practical recognition that by the adoption of systematic measures to destroy or limit the dissemination of the specific organisms on the one hand and to remove associated factors and predisposing causes which favour its prevalence on the other the prevention of tuberculosis is actually attainable.

The relation of phthisis to climate is still much misunderstood. The fact is, that though influenced by climate it is to a very large extent independent of it, being practically an ubiquitous malady but closely connected with aggregations of the population. Where people are aggregated together in imperfectly lighted, badly ventilated, and insanitary houses, there tuberculosis is rampant, whilst a population which can live a healthy open-air life enjoys comparative immunity. It has been shown by Ransome, Cornet, and others that even in the same town there may be local "infected areas" or even "infected houses," notorious for their persistent phthisis mortality.

Much has of recent years been done towards the adoption of systematic measures for disinfection in the management of phthisical patients, which is the very starting-point of efficient prophylaxis, as yet but little towards disinfecting rooms, dwellings, and belongings which may harbour and maintain in a state of latent activity the deadly germs of the disease. Important to all, this is doubly so to delicate or predisposed subjects and should never be lost sight of in the selection and preparation of dwelling houses. Measures to ensure efficient cleansing and free resort to nature's own disinfectants—fresh air, air in motion, and sunshine—should always be employed wherever tuberculosis is or has been. In this matter of disinfection we are far behind some other countries; for example, Italy and France. I note that at the French Tuberculosis Congress, held in July last, M. Martin stated that, whereas in 1892 only 4000 dwellings tenanted by tuberculous patients in Paris had been disinfected, in the first six months of 1898 no less than 7000 had been dealt with. Some of the speakers at this Congress severely criticised the apathy of the medical profession in the matter of an aggressive movement against tuberculosis. Can we say that the members of the profession on this side of the channel are as enthusiastic as the situation demands? We certainly cannot hope to cope with the almost absolute apathy of a large section of the public if there is relative apathy on our part.

The danger, more especially to children, of infected milk is now widely recognised and the Report of the Royal Commission on Tuberculosis, issued this year, has given prominence to the extent of the danger by laying stress upon the extraordinary virulence which such infected milk may possess. Fortunate as it is that sterilisation by boiling is so reliable a safeguard, the aim of the future must be to secure an uncontaminated milk-supply to start with, and it is to be hoped that the Government will in the near future take steps to carry out the recommendations of the Commission as to dairies and dairy stock, matters in which we

are far behind some of our continental neighbours and colonial *confrères*. The danger from meat has, as the Commissioners point out, been much over-estimated, and it seems clear that it could be reduced to insignificant proportions by provision for systematic meat inspection by properly qualified inspectors—a matter urgently requiring the attention of the public authorities. It is not a little surprising to find that this important duty may, under existing conditions, be entrusted to carpenters, bricklayers, plumbers, or stonemasons—a state of affairs which will soon be remedied if the recommendations of the Royal Commission are carried out. It is noteworthy that the Commissioners have emphasised that the only way to strike at the root of this matter of food in relation to tuberculosis is to make an organised attempt at the elimination of bovine tuberculosis.

The advisability of making tuberculosis a notifiable disease has been much discussed; no drastic steps in this direction seem practicable or even desirable, but in my opinion regulations for a modified notification, similar to those in force in New York since 1893, might with advantage be adopted in this country, particularly in our large cities. I refer to the regulations of the New York Board of Health, by which the authorities of all public institutions were *required* to notify all cases of pulmonary tuberculosis and all private practitioners were *requested* to do the same, every facility being at the same time afforded for bacteriological examination of tuberculous cases at the public expense, for efficient disinfection by the sanitary authorities and for actual renovation of premises which had been occupied by phthisical patients. Such measures would probably, in time, pave the way for more comprehensive measures, as has been the case in New York. Since last year, 1897, the notification of tuberculosis has become compulsory in that city—a broad distinction being, however, intentionally made between it as a "communicable" disease and the common infectious fevers. The death-rate from all tuberculous diseases in New York has fallen from 4·42 in 1886 to 2·85 it 1897, and, according to Dr. Herman Biggs, who has done so much to bring this about, the present year promises to chronicle a still more decided advance in the same direction.

In any organised attempt to control tuberculosis protection of the healthy and facilities for the efficient treatment of the diseased must go hand in hand. Hence there is a pressing need for the provision in this country of suitable sanatoria for phthisical patients where open-air and dietetic *régime* can be carried out under strict medical supervision and under the most favourable hygienic conditions. That sanatoria for pulmonary tuberculosis are not dependent for their success on particular climatic conditions is evidenced by the diversity of latitude, altitude, and surroundings of many noted sanatoria. It is not only at Davos or at Denver that such success is obtained—Falkenstein, Nordrach, and Goerbersdorf can claim similarly favourable results. If Falkenstein within sight of the chimneys of Frankfort-on-the-Main has accomplished so much, thanks in the first instance to Dettweiler's foresight and administration, why should we not have similar sanatoria in this country? With due care in the selection of sites, the essential requirements of purity of air, a relatively large amount of sunshine, dryness of subsoil, and protection from cold winds, can certainly be fulfilled. In passing we may remark that in many quarters the importance of climate has been over-estimated and that of diet and nutrition under-estimated. This reference to the sanatorium treatment of pulmonary tuberculosis naturally involves the question of the curability of the disease. Contrary to the opinion of a past generation and to the belief, or at least the practice, of many in our own day, we know that whilst the great hope for humanity lies in its prevention, the arrest of tuberculous disease amounting to a practical and permanent cure is a matter of common occurrence. It may be thought that reference to the cure of phthisis is irrelevant to the theme of prevention—as a matter of fact it is but an instance of the successful operation of prevention. Every pathologist knows that it is the rule for the tissues of the body when invaded by tuberculosis to make a definite attempt to overcome the morbid process and to prevent the further inroads of the disease. It is ours to reinforce this natural attempt at cure, and victory or defeat will, other things being equal, turn upon the stage of the conflict at which such aid is forthcoming. Similarly in the case of those who have a predisposition to tuberculosis, inherited or acquired, prevention is everything.

The prevention of tuberculosis is second to none in importance in the whole range of preventive medicine, and the recently constituted Association for the Prevention of Tuberculosis has ample scope for its operations. A well-organised and comprehensive forward movement must soon make an appreciable difference in the ravages of this disease, already steadily declining, and ten years of earnest and sustained effort should mean the saving of tens of thousands of lives.

When one is engaged in urging the necessity for a vigorous forward movement against preventable disease it is not inspiriting to recall that in the case of small-pox the highest executive authorities have within the last three months carried out a "strategic movement to the rear," which has placed the nation in the illogical position of watching a "tremendous" and, as most of us think, uncalled-for "experiment" in a matter of literally vital importance. No doubt moral suasion and the logic of facts would be preferable to compulsion in any form in a community of ideal intelligence and open-mindedness, but with the conspicuous inability on the part of so many to distinguish between the *post hoc* and the *propter hoc* in the matter of the alleged ill-effects of vaccination the prospect is not particularly bright. It is true that owing to the attitude of local authorities the state of affairs as regards vaccination under the previous Act was becoming increasingly unsatisfactory, but surely the rational remedy was not in the direction of the very open door of a "conscience clause." In matters of public health we look to the Government of the country, influenced by the weight of expert evidence, to lead the way in the path of progress, and not to modify its policy in the face of an adverse wave of popular opinion. However, the law being as it is, we must make the most of the good features of the Act of 1898 and, for the time being, concentrate attention on pressing home the true facts of the case respecting vaccination and re-vaccination, so that the number of those availing themselves of the conscience clause shall not be such as to put to the full test the potentialities of this remarkable innovation in public legislation.

Thus far we have for the most part considered instances of the principle of the operation of the prevention in connexion with the group of specific infective diseases, and it is in this field that we see its importance illustrated in the most striking way and on the largest possible scale. But the same principle is also capable of widespread and increasing application in the case of affections of toxic or degenerative origin. The prophylaxis of affections of toxic origin is a wide and complicated subject, which is attracting increasing attention and which is full of promise for the future. Again, many degenerative changes, for example, in the central nervous system which appear to be primary are in reality secondary to infective or toxic processes which either exercise a directly destructive action on the nerve tissue or pave the way for premature decay by initiating that slow process of retrogression which terminates in nervous death, as so ably emphasised by Dr. Clouston in his recent address on the "Neuroses and Psychoses of Decadence." It is not going too far to say that our present-day knowledge of the causation of many of the most formidable diseases of the spinal cord and of the brain brings them within range of a comprehensive preventive medicine. The mention of three all too common examples—locomotor ataxy, general paralysis of the insane, and the neuroses of chronic alcoholism, is sufficient to illustrate this, and may also serve to remind us that in the prevention of disease we must assign due importance to moral as well as to physical agencies. In passing, allusion must be made to the vast influence of alcoholic excess in causing, aggravating, or predisposing to disease. It is difficult to over-estimate the importance of this subject, and to leave it out of account is to surrender an impregnable position in preventive medicine.

One more illustration of the importance of the principle in relation to the preservation of health of the individual will suffice—the application of the principle of prevention to diseases of the heart and circulation. How many deaths due to apoplexy, to angina pectoris, and to other heart affections might be averted or postponed if timely preventive measures were taken to arrest insidious processes which go on unperceived for months or years before they culminate in grave or hopeless conditions? Men are appalled in the presence of a tragic and apparently unavoidable sudden death, or deplore the limitations of the healing art in dealing with the consequences of a paralytic stroke, but for the most part they do not stop to consider that the result might have been very different had an opportunity been afforded for prevention. There is the curious anomaly of a man who periodically visits his dentist every six or twelve

months in order that any commencing decay may be detected and arrested before it has gone too far, whilst he considers it quite superfluous to remember that there may be commencing in his person some morbid process, controllable at first, but which if allowed to go on unchecked will in time lead to the arrest of some vital function. In the former instance, where the issue is comparatively a minor one, he applies the principle of prevention, but his attitude is one of *laissez faire* when the heart, the arteries, or some internal organ are at stake. Have you ever thought of the number of lives annually sacrificed prematurely through simple neglect of this great principle? Upon you who to-day embrace the profession of medicine and upon all who practise it this places great responsibility. It is our duty to be ever on the look-out for the first warnings of serious tendencies, not to be content with treating patent derangements of health, but to discover the often less obtrusive indications of potentially grave disease. To the student I would also say—give particular attention to the earliest manifestations of disease, to conditions which are on the borderland between the physiological and the pathological, and to anomalous cases, and—when you know enough—do not be too much fettered by classical types of disease. Again, cultivate a knowledge of perspective in diagnosis and prognosis, do not be content with an array of symptoms and physical signs, however exhaustive, but single out in your mind which are of primary and essential importance and which are but of secondary or incidental significance, then make your diagnosis as accurately as may be, but remember that you must not stop there—the recognition of the true nature of the disease is but a step to ascertaining to what extent and in what precise ways it threatens the physiological integrity of the body.

It is noteworthy and true both of acute and chronic disease that very often danger—preventable danger, too—comes not from the steady advance of the primary malady, but from secondary or incidental development, all the more formidable because unexpected. The basis of what goes by the name of "cure" is very often a series of preventive acts. To a very considerable extent in serious disease our efforts are necessarily limited to warding off threatened dangers incidental to the disease which as such is beyond our control. To use a classical simile, our *rôle* is as that of the pilot—to steer the ship and not quell the storm. That man will best treat a case of typhoid fever or pneumonia who is on the look-out for the first sign of an approaching squall and who navigates accordingly, and the frail bark of a heart embarrassed by valvular disease can only be safely steered by him who realises how to avoid the sunken rocks and cross-currents which threaten to arrest its course.

To some it may appear that the need for prevention will become less with increasing knowledge of specific remedies and more radical treatment. But our clinical experience thus far entirely negatives this and serves to enhance the importance of prevention, though in a somewhat different way. The skilled surgeon may by early operation remove the cause and thus prevent a threatened fatal peritonitis, though the same operation would be of no avail if the peritonitis had fully developed and the efficacy of diphtheria antitoxin in the treatment of diphtheria is in direct proportion to the timeliness of its administration. In each instance the point is to anticipate a further and more formidable development. Instances might be multiplied, but this at least is clear, that in the treatment of disease the principle of prevention is as fundamental as it is in the preservation of the health of the individual, or in the prophylaxis of the plagues of humanity in the aggregate. The community needs to appreciate that in all these three directions there is need for a forward movement—an advance in practice commensurate with the advance in knowledge.

To some of the more junior students the thought will probably occur that at least two years must elapse before they have any opportunity of studying at the bedside the operation of this principle. To such I would say that to recognise without delay its essential importance and far-reaching influence will be to ensure a serious view of your studies from the start. You cannot afford to trifle with any part of your course. The deeper your knowledge of anatomy and physiology the better will be your insight into the facts and laws of life, the only basis of an art of healing which can lay claim to be called scientific, and the deeper your insight into the processes of the healthy organism the better will you be equipped to take your place later as its guardian and protector. You will, I hope, love your work for the work's sake, whether in laboratory, ward, or class room, but it will not be amiss if now and again you pause to ask, What bearing may this have on the prevention of disease? To do this will, if I mistake not, tend towards a deeper and more enthusiastic interest in the work you have in hand; it will ensure your looking beyond the test of examinations to the more searching ordeal of hand-to-hand conflict with disease, and it will also serve to keep before you that unity of purpose which permeates and coördinates every department of your work.

You, gentlemen, who to-day enter the portal of medicine have agreed to take upon you a duty at once noble and responsible. It is no cant to call it noble, because your life work will be to prevent and to relieve the sufferings of your fellow men and one which affords unique opportunities for seeking to consider the interests of others before your own. But let us never forget that the more noble the office the more ignoble does he become who unworthily fills it. With our calling it is true indeed—

> Noble is that's nobly done.

The duty is a responsible one, for the material upon which you work is none other than man himself. The results of our work which we see day by day are enough to impress upon us something of the measure of that responsibility, but we must regard our life-work in yet another and higher light—in the light of a stewardship that has hereafter to be accounted for when we shall have exchanged the "seen and temporal" for "the unseen and eternal." "It is required in stewards that a man be found faithful."

MIDDLESEX HOSPITAL.

INTRODUCTORY ADDRESS BY DR. ARTHUR VOELCKER, ASSISTANT PHYSICIAN TO THE HOSPITAL, ON "A RIGHT MEDICAL EDUCATION."

Dr. VOELCKER, after mentioning that the introductory lectures afforded opportunities to medical men to give advice to those entering the profession, pointed out that they also enabled the public to learn more of the aims and needs of the profession. Although it was undesirable to dwell too much on the virtues of the medical profession as a whole or to bewail their hardships, it was necessary that the public should ask themselves whether they were doing their duty to the profession. To engage in acts of charity was one of the highest privileges of the profession, but if under this plea medical men were imposed upon and exploited by so-called philanthropists he warned them that the relations of the profession to the public would be placed on a much more business basis in the future. After welcoming the new students on behalf of his colleagues he offered them his congratulations on having chosen a school whose past was the record of the work and lives of some of the greatest ornaments of the profession, whose present bore the impress of growth and the recognition of the necessity for thorough equipment in all the branches of practical and scientific medical study, and whose future was in their own hands. Those who were continuing their medical studies would find additional facilities for work in the new laboratories of anatomy, physiology, pathology, and bacteriology. It was most important to learn how to make use of opportunities, for, as Goethe says:

> "Doch der den Augenblick ergreift,
> Das ist der rechte Mann."

The student of the present day was too apt to expect all his information to be condensed and rendered easily assimilable for him by his teachers, instead of educating his own powers of observation and assimilation. A medical education on such prepared food was very apt to have the same result on the student's mind as artificial food-substitutes too often had on the infant's body. Ruskin recognised this tendency and reproved it. "To be excited for an hour," he wrote, "if possible amused, to get the knowledge it has cost a man half his life to gather, first sweetened up to make it palatable, then kneaded into the smallest possible pills, and to swallow it homœopathically and be wise—it is not to be done." Lectures were unpopular among students, who preferred demonstrations and who claimed that they could read the subject up much better in a text-book, but who forgot that the lecturer was enabled to point out the relative importance of the different facts and could give his hearers the benefit of his personal experience.

Attendance on lectures was rightly insisted on, and parents and guardians had a right to expect it. The habit of note-taking should be carefully practised. The demand for increased practical instruction was well justified and the new school buildings of the Middlesex Hospital were an eloquent expression of the recognition of the desirability and necessity of expansion in this direction. When spoken of by some hostile critics as a decaying school, for answer we may point to our new laboratories and ask if these are the sign of decay. Does a dying tree send out fresh branches? Laboratories were absolutely essential for the adequate teaching of the medical man, not only for the acquaintance it gave him with the manipulation of instruments of precision and the habits of observation, but also for the habits of self-help and concentration of his energies. There was a danger lest an unchecked enthusiasm should lead to the encouragement of a fatal faculty for flirtation with work instead of keeping one object in sight at a time. Some short-sighted people have asserted that it was an injustice to the patients of the charity that the Middlesex Hospital should have taken any part in the erection and furnishing of these new buildings, but they forget that the aim and object of all these buildings was to enable those in whose hands the maintenance of the health of the community in the near future will be placed to be thoroughly trained, and just as a well-trained and equipped navy and army were the best guarantees for peace so the hospital was best studying the interests of those it desired to help by providing them with a well-trained and equipped medical force to protect them from and aid them against the onslaughts of disease. In commercial undertakings it has been found advantageous to secure the services of highly-trained scientific men who by their researches in laboratories equipped and maintained at the expense of the proprietors of such undertakings were enabled to give such advice as amply to repay the outlay involved, and in medical undertakings the same would hold good. It was practically impossible for the medical man to live on the return from the pursuit of the purely scientific side of his profession and he should not be asked to devote himself to such work without being offered some return which might at least enable him to pay his way. Medical men were entitled to look to their profession for the earning of their livelihood and if the public only knew what their indebtedness was to those who, often under great disadvantages, work at the scientific side of medicine many would come forward and encourage and render possible the continuance of that work by the endowment of laboratories and lectureships. Laboratories and other increased facilities for work laid the students under increased responsibility for their proper employment. No laboratory or lecture-room alone ever made a good man; they must be used as adjuncts to clinical work and not as substitutes for it. Disease could only be studied at the bedside. Here not only disease but human nature was studied and the medical man learnt how to deal with the people—how to give them confidence and sympathy as well as how to relieve them.

The student should be very careful of the way in which he spoke of medical matters in lay circles. The public were inclined to regard everybody connected with a hospital as a "doctor" and the loose and random talk of an irresponsible student acquired the weight attached to a medical opinion. The public, though much informed, was not well informed on hospital matters and modern sensational journalism while it attracted readers gave them a very false impression of actual facts. It was easy to give a gruesome account of any operation and to mistake calmness for indifference, interest for curiosity, and satisfaction for "gloating," but it was incumbent on the student, both from his sense of loyalty to his hospital and the knowledge of the high aim of the profession he had chosen, to avoid anything which might give those outside any cause to accuse him of callousness, cruelty, or any behaviour unworthy of a gentleman. Besides difficulties connected with work the student had difficulties connected with play. He had to strike the happy mean between the claims of Æsculapius and Hercules. The danger was perhaps greater in the direction of over-work than over-play. The legitimate engagement in any branch of true sport harmed no one; by true sport was meant that the man should engage in it himself and not merely be a hanger-on. In mapping out his work the student should leave a margin, and that a not too small one, for other things than strictly professional work. To allow recreation to usurp the place of work was disloyal to the hospital and dishonourable to those who enabled him to study at the hospital. In sport as in work it was steady, consistent effort which succeeded, and the training of the mind, like that of the body, was a gradual process, too much of either making a man "stale," too little making him "soft." For some sport had no attractions; let them as well as their sporting colleagues cultivate some hobby, something apart from their work which would give relaxation without idleness, and whatever form this hobby took let it be done as well as possible and without interfering with work. The medical student would do well to use his opportunities in London to cultivate his æsthetic tastes, for now was the time when relaxation from work was to be found in recreation and recreation not only in athletics but in the cultivation of the mind. In no profession was it more desirable to resist the all-absorbing interests of professional work. The cultivation of a suitable hobby added years to life, breadth to the mind, health to the body, and pleasure to those around us. These benefits reacted on strictly professional work and enabled it to be done all the better. The student might ask what advantage he was to gain from all this and for answer was reminded of a translation of some lines by Goethe, bidding him "Do thine own task and be therewith content and all beside leave to the Master Power."

UNIVERSITY COLLEGE.

INTRODUCTORY ADDRESS BY MR. SIDNEY SPOKES, M.R.C.S. ENG., L.D.S., R.C.S., DENTAL SURGEON TO THE HOSPITAL, ON "THE PRESENT STATUS OF THE MEDICAL PROFESSION."

[AFTER introductory remarks Mr. Spokes quoted Ruskin that man's proper business in this world falls mainly into three divisions. First, to know themselves and the existing state of things they have to do with. Secondly, to be happy in themselves and in the existing state of things. Thirdly, to mend themselves and the existing state of things as far as either are marred and mendable. Applying these rules to the medical man Mr. Spokes discussed the existing state of things and the status and authority of the profession, and continued:—]

Quite recently we have had an opportunity of observing the value which is placed upon medical authority and expert opinion by the passing of the Vaccination Act. In spite of weighty official representations as to the necessity for vaccination the conscience clause was accepted by both Houses. But the impression left upon one's mind by the discussion was that the majority did not really dispute the value of vaccination, but from some reason or other succumbed to the views of so many of their constituents and boards of guardians throughout the country. Whilst we may express gratification at the protest by the House of Lords, I think we need not on the whole feel too much regret at the new legislation, especially if supplemented by an insistence upon revaccination. Without going into the questions of "the liberty of the subject" and "conscientious objection," one may recollect the unpleasant task it always was to vaccinate the offspring of an unwilling parent. There is still one danger remaining under the new Act which seems to have escaped attention. In spite of improved lymph I venture to prophesy that there will still occur occasional instances of "bad arms." As in the past, certain ignorant mothers will endeavour to rub the lymph away directly the operator's back is turned, and the fact that vaccination is now to be performed in the private dwelling-house instead of at a public station will, in my opinion, conduce quite as much to the introduction of other inoculation than vaccinia. In any case, the antivaccinationists have now provided the nation with a monster experiment upon the living subject which, whilst not needed by the majority, will be none the less interesting to watch from the ratepayer's point of view if from no other.

Let us conclude our brief sketch of the existing state of things by a more pleasing reference to the new Army Regulations for the Medical Service. The number of army surgeons is slightly over 800—too small probably, but their recognition now as something better than "camp followers" reflects honour on the profession to which they belong. The formation by warrant of the Royal Army Medical Corps will do something towards giving the surgeons a proper standing; they have, I believe, a larger proportion of Victoria Crosses than any other arm of the service and will doubtless continue

to maintain the high reputation for devotion to duty which army medical men have always held.

Can we, then, take Ruskin's advice and be happy? I think so, but it is of course a question which each will answer for himself. That we are not completely satisfied and content need not make us unhappy. It is said that the happiest man is he with the least ambition and therefore with the fewest disappointments. That is not the kind of happiness the medical profession should enjoy and we may perhaps remember that our text allows us to alter the existing state of things so far as they are "marred and mendable." There is no difficulty in framing a list of needed improvements—one is embarrassed only at having to select examples.

Leaving on one side the question of representation in Parliament and on the General Medical Council, I would suggest that one of the great necessities in the future is a continuance of the struggle to keep the practice of medicine upon professional lines. It is essential that the patient should feel that he is being treated by one whom he may trust to do the best for him with the least possible admixture of the commercial spirit, whose diagnosis, treatment, and prognosis run no chance of being vitiated by any ulterior motives of increased pecuniary gain. With these objects in view it might be well, for instance, that as far as possible the medical man should dispense with dispensing and that the supplying of drugs should be left in the hands of pharmaceutical chemists, who may properly claim by their training to do this work. I know that in some country districts it is impossible and that in some particular cases the patients themselves might prefer the present method. But I think the time has come for the medical practitioner to charge his fee for the actual attendance and skill and not for supplying material. The sweating of medical men by certain medical aid societies is another phase of commercialism for which it must be hoped some remedy can be found.

Passing from this subject one may next notice the existence of unqualified practice by absolutely irresponsible persons which brings much discredit. Nothing short of preventing unregistered persons practising "for gain" is, I am afraid, likely to stop this, and even then unless there is some amendment of the Companies Act there would be an opportunity for escape. Many are not aware that under the present Act an unregistered man who has been successfully prosecuted can proceed with the help of half-a-dozen relations to "turn himself into a company," and as such may legally do exactly the same thing which was illegal for him as an individual. This is perhaps the most "marred and mendable" thing before us, and fortunately there is reason for thinking that the present Government intend to deal with it.

In regard to the question of public health may we not hope that before long a Minister may be charged by Government with full control and responsibility in the conduct of this vast service? By a combination of districts medical officers of health should be appointed as such and debarred from private practice. The work to be properly performed requires special and expert knowledge and training and there are several reasons why the officer should not be in general practice, although some previous experience of that would be an advantage.

The question of coroners' inquiries affords another instance where some change would probably be beneficial. The fact that the jury is impanelled to ascertain the cause of death would surely lead one to think that medical evidence or direction was necessary in every case. A medico-legal coroner is apparently the best for the work and there would be no lack of medical men willing to undergo the necessary amount of legal training if this matter ever receives the attention it deserves.

Time bids me cut short our list of grievances because I wish to close with a few remarks of a more personal nature to old and new students. To the latter I would say: Get rid as soon as possible of the idea that lectures are a waste of time. Do not neglect the auditory pathway by which information can be conveyed. But do not, on the other hand, rely alone upon the lecture; indeed, it is a good plan to read a text-book in advance, and then to take notes of the principal headings of the lecture, to be elaborated afterwards. Study well any graphic illustrations the professor may present by diagrams, and you will, by a combination of ear, eye, and hand, find yourselves able to reliably register in the brain the facts presented to you. The majority of old students are probably thinking of going into general practice, and as one who has been through the mill I venture to address them. I commenced with a pupilage in the country, and although the times are out of joint for a continuance of that system it had many advantages. The first lesson was upon the necessity of professional secrecy. One soon saw the wisdom and utility of the Hippocratic oath and learned to appreciate William Cowper's saying that "confidants in general are like crazy firelocks which are no sooner charged and cocked than the spring gives way and the report immediately follows."

Much is required of the modern practitioner by an exacting public. A confession of ignorance is sometimes necessary, although this requires some pluck and is misunderstood by parents and friends, who expect a medical man to know everything connected with the human body, and that he should be able to work miracles and should not require a holiday. He must be prepared to deal with everything—from advising on the dangers or advantages of cycling to the examination for life insurance. Indeed, one could almost be serious in saying that, of course, the intelligent practitioner will have made himself acquainted with the arguments and experiments of Professor Schenk, for he must now be prepared to stand an examination by the British matron upon the subject of the determination of sex. The authorised English translation (under the supervision of a London physician) is advertised and noticed, I am told, in the ladies' journals and there will be many mothers anxious to try the experiment of securing a son under the guidance of the family medical man. Before entering upon practice it is an advantage to make a voyage or expedition; it gives a wider view of men and things, although some argue that it makes it difficult to settle down afterwards. But, as Hazlitt said, "You will bring with you from your books and solitary reveries a wrong measure of men and things unless you correct it by careful experience and mixed observation"; but this advice should have the emphasis on *careful* experience and should not be taken as an excuse for making observations of too mixed a character. Those students, sons of medical men, going back to practise with their fathers should let them down lightly and not fire off all their lately acquired knowledge to the disparagement of their progenitors. Do all that is possible to secure and maintain a good feeling with fellow-practitioners. Nothing makes matters go easier than a real friendship with others similarly situated.

With respect to a "good bedside manner," if it is natural so much the better, but something may be done to cultivate it without affectation. Lord Chesterfield was of opinion that manner is of more importance than matter, and most of us can possibly recall instances where this seemed to hold good in the practice of medicine. To quote Hazlitt once more, "Gravity is one great ingredient in the conduct of life, and perhaps a certain share of it is hardly to be dispensed with. Few people can afford to be quite unaffected. At any rate, do not put your worst qualities foremost." At all events none of you, I am sure, will wish to imitate that personage of whom Tourguéneff said, "He had the air of his own statue erected by national subscription." Those within reach of such advantages will no doubt avail themselves of the excellent arrangements now made for "post-graduate" instruction, and they have also the advantage of getting the aid of the consultant in serious cases. This relief in responsibility is more often denied to the remote country practitioner, who should, I think, be considered himself as a specialist of specialists, and be an exceptionally strong man.

In these days of anæsthetics, provincial practitioners should be prepared to administer them with the confidence begotten of practical experience, and certainly they will do well to make themselves as expert in the use of nitrous oxide as is the dentist. The latter sometimes complains that at present he has really to administer the gas whilst the family medical adviser can merely sit on the window-sill and look on. To all I would recommend an early attendance upon midwifery cases. When once summoned you will not feel comfortable until a visit has been paid and when once it is recognised that such is your rule and that it is unnecessary to give a long warning to ensure attendance it will be found that false alarms will not occur so often and any leisure time thus gained can be legitimately enjoyed. Another point of importance is to have a good knowledge of children's diseases, a matter too often neglected. It is not too much to say that the young practitioner who can show that he is a capable obstetrician and understands the treatment

and right feeding of children has the best of introductions to general practice, and it will be his own fault if he does not become the trusted family attendant on all occasions when one is required.

Do you ask me what is the reward for your efforts? I think not; neither is it necessary to speak of punishment for failure. No hope of "making a fortune" has led your footsteps into Medicine. An honourable competence in return for a conscientious and self-denying life well spent in the service of your fellow-creatures is what you aspire to, and no eloquent quotation as a peroration to my remarks can add to your zeal. But in the name of the Medical Faculty of University College I can assure you all of their best wishes for your success.

ROYAL FREE HOSPITAL: SCHOOL OF MEDICINE FOR WOMEN.

INTRODUCTORY ADDRESS BY DR. J. WALTER CARR, ASSISTANT PHYSICIAN TO THE HOSPITAL, ON "FASHION IN MEDICINE."

I CAN well imagine that many now present who are new, and some perhaps who are not new, to the study of medicine will start at the mention of the word "fashion," and especially at the suggestion that in medical questions we are subject to its rule. But those who take this view forget that we are human beings first and medical men or women afterwards, and that loftily though we may talk of medical science yet we necessarily bring with us to its study all our natural weaknesses, prejudices, and superstitions; also that it comes to but few to make new departures, to take a fresh initiative, or to get out of some old rut of thought or practice. The great majority must necessarily be followers, not leaders, and hence it comes to pass that in medicine, quite as much as in any other sphere of life, we are subject—often helplessly and hopelessly—to the bondage of fashion, custom, habit, and authority. It is as requisite to be orthodox in medicine as in theology; in fact, I am not sure that lawlessness in the medical world does not bring down more severe punishment, and certainly gets less appreciative sympathy, than lawlessness in the Church.

It is an interesting and instructive, albeit somewhat humiliating, study, even if we confine ourselves to comparatively recent times, to follow the influence and vagaries of fashion in pathological theories and dogmas and still more in the domain of treatment. Let us deal merely with a few of the chief methods which have been popular in the treatment of fever and inflammation as exemplified, say, in such well-marked and relatively common diseases as pneumonia, typhoid fever, and rheumatic fever.

Little more than fifty years ago a fever was regarded as a sort of morbid entity to be expelled from the body by thoroughly drastic measures. The sheet-anchor of the treatment was venesection, but this was assisted by the free use of depressant and nauseating drugs such as antimony, by mercury pushed to the limits of tolerance or beyond, by purgation and by blistering, and by semi-starvation as a further inducement to the fever to depart. With present-day notions and experience these things may sound almost incredible, but read the directions laid down by eminent authorities for the treatment of pneumonia: "You bleed early from the arm and if necessary you bleed a second or a third time, and if under this treatment resolution does not speedily take place you bleed locally by leeches or by cupping and likewise give tartar-emetic more or less freely, to all of which counter-irritation may be superadded in the more advanced stages. Mercury is also to be given freely, even to salivation, combined with opium." Sir Thomas Watson, the leading physician of his day, lecturing a little over half a century ago, at a time when bleeding was becoming rather less popular, recommends blistering for pneumonia, but says it should not be done in a half-hearted fashion: "The patient should have a waistcoat almost, or at any rate a breastplate of blistering plaster." Speaking of the treatment of pleurisy he says: "Cover the side with leeches and when they have sucked forth what they can let their bites continue to discharge blood into a thick, absorbing poultice." Patients suffering from acute rheumatism seem to have undergone even more heroic treatment, probably because it naturally runs a more protracted course than does pneumonia. We have the notes of the case of a man, aged twenty-eight years, treated in King's College Hospital in 1840 for two attacks of rheumatic fever; for the first attack he was in the hospital six weeks and for the second fourteen weeks, with an interval of only about a month between. I will not weary you with the details of the numerous bleedings, cuppings, leechings, and blisterings to which he was subjected; suffice it to say that in all 110 oz. of blood were withdrawn besides that which was lost by leeches, and that the latter was no inconsiderable amount may be inferred from his having as many as ten leeches applied at once to an inflamed joint. The additional fact that at one time he was also given 3 gr. of calomel every 3 hours is to be regarded as a mere detail of treatment scarcely worthy of note. The result hardly seems to have been satisfactory, for 2 months later he was readmitted, but the notekeeper appears to have got tired, for though the patient is said to have ultimately recovered the date of his discharge is not recorded. A few years later the treatment had become less heroic, but a vigorous administration of calomel was believed in by some. In Sir Thomas Watson's lectures we read: "Some have given large doses of calomel in the outset of the disease, such as half a scruple or a scruple, repeating the dose daily or oftener with occasional purgatives perhaps till the urgent symptoms gave way, and in this manner I have seen the disease apparently cut short. But I have also known many instances in which the disease was painful and protracted and obstinate, although this practice was adopted early and fairly prosecuted." Yet in these degenerate days I have already well-nigh grown tired of encouraging cautious house physicians to give a single small dose of calomel at the commencement of the treatment of a case of rheumatic fever. It would be easy to multiply examples of this kind of thing; I will add but one more. "A child of twenty-eight months took in nine days 350 grains of calomel and in six of these days 136 grains of jalap"; she was suffering from cerebral symptoms, upon the cause of which it is useless to speculate. The point is that the child recovered; under modern treatment she might not have done.

What was the meaning of all this energy? Our medical predecessors were by no means fools and we must not imagine that all their treatment was useless or barbarous. One reason for the continuance of this heroic treatment was doubtless the fact that in a certain number of cases it was successful, sometimes eminently and strikingly so. Now from these instances of success two fallacious arguments arose: one is the idea that because a little blood-letting sometimes did good that more would do more good, or that if one venesection failed to give relief repeated withdrawals of blood might attain the desired end; the other, that because venesection was beneficial in some cases of fever or inflammation that therefore it would probably do good in all, forgetful that other circumstances might be entirely different. No one of course would dream now of bleeding a typhoid fever patient, yet in one of the worst cases I have ever met with a moderate intestinal hæmorrhage was followed by marked improvement in the mental state, the patient regaining consciousness for the first time for over a week. On another occasion an attack which gave every indication of being a very severe one became exceedingly mild after a profuse epistaxis. Of course, the improvement in each case may have been a coincidence merely, none the less it was very marked, and it is easy to imagine the medical men of a former generation pointing to such cases as conclusive evidence of the value of blood-letting.

As was inevitable, a tremendous reaction set in against the lowering treatment of fevers; Dr. Graves in Dublin taught that fever patients should be fed and not starved and desired that the epitaph on his tombstone should be, "He fed fevers." But the reaction went further and an actively stimulant treatment became the fashion. Dr. Todd of King's College Hospital, one of the leaders of the reactionary movement, thus describes his treatment in 1851 of a severe case of typhoid fever in a strongly built man, aged thirty-two years. From Jan. 21st to the 27th the patient took half an ounce of brandy every hour. "I now," says Dr. Todd, "doubled the quantity of brandy and ordered ammonia and chloric ether every fourth hour. On the 29th I felt it needful to increase the stimulant to 5 drachms every half hour, or 30 oz. in the day. On Feb. 3rd the stimulant was reduced by 6 oz., so that he now took 1 oz. every hour instead of 10 drachms; the chloric ether was omitted." After this the patient slowly sank and eventually died from intestinal hæmorrhage on Feb. 9th. "Under the highest stimulation all the symptoms improved, the chest became more free, the head clearer, the fever

less, the tongue cleaner." Says Dr. Todd, almost pathetically: "I do not see what more we could have done; we cannot plead guilty to the charge of *nimia medici diligentia*." Again, a girl of fourteen years was given 1½ oz. of brandy every hour for three days together, and for the next fortnight ½ oz. was administered hourly, this being sometimes much increased as occasion required; she recovered. An eminent physician, not dead many years, used to teach: "There is one drug for pneumonia, it is in your Pharmacopœia—brandy, give it." It is true that not all cases were treated in this heroic fashion; still, as the idea grew that alcohol was *the* drug for fever, so the fashion spread, until it was given more and more freely, more and more indiscriminately.

Again, and naturally, came the reaction, and just as vegetarianism is to be looked upon as the practical protest against our excessive meat-eating habits, so the outward and visible sign of the reaction against unreasonable alcoholic stimulation is the temperance hospital. And yet surely so extreme a protest is as unscientific as the practice protested against. Disease may undoubtedly be treated, and successfully treated, without venesection and yet a timely resort to bleeding may certainly be of the utmost value. Why abandon the practice altogether because it has been abused? So no doubt we can to a considerable extent substitute other things for alcohol, and yet why deliberately deprive ourselves of even a single remedy which may at times at any rate be of the greatest utility?

The next fashion in the treatment of fever was the endeavour to reduce the temperature, mainly in two ways—either by the direct application of cold or by the administration of drugs. With regard to the cold treatment little need be said: its tendency on the whole has been beneficial, and though, like everything else, it may be carried too far, yet excess and undue enthusiasm are largely cooled by the practical difficulties in the carrying out of the treatment and by the natural prejudices of the patient or his friends, more especially against cold bathing. Still we need to beware of the old fallacy that because cold baths may undoubtedly save life in hyperpyrexia therefore external cold is necessarily equally useful in milder cases of fever. There is really but little in common between the two conditions. A very different matter is the artificial reduction of temperature by powerful drugs—antipyrin, antifebrin, phenacetin, &c. When first the antipyretic action of these bodies was discovered men thought that fever was for ever robbed of its terrors—that once keep down the temperature all other bad symptoms would disappear. The result was that any rise of temperature was merely regarded as nature's invitation for a knock-down blow from a well-chosen and well-administered antipyretic drug. As a consequence the therapeutical art never perhaps in this century reached a lower level. If a patient had fever, no matter from what cause, very little matter of what degree, the practitioner's one idea was to reduce his temperature. Is it any wonder that when the influenza epidemic appeared, with its great and sudden rises of temperature, the public should think that they had the key to its successful treatment in their own hands and that sufficiently large doses of antipyrin would soon cure them? Can they be blamed for endeavouring merely to improve upon the teaching of their professional advisers? However, the discovery was soon made that even though it was possible to reduce the temperature it was not equally possible to relieve the attendant symptoms; that although we might cut short a pyrexia we could not cut short the disease of which the pyrexia was merely one of the symptoms; and, further, that whilst we were attempting exclusively to relieve the one symptom, the high temperature, other symptoms might get worse and even new ones might develop. We began even to learn the lesson that nature has always been trying to teach us in some of the worst and most fatal varieties of peritonitis and pneumonia, the apyrexial forms, that moderate fever is a friend rather than an enemy, that its absence is often one of the most serious of symptoms, and that its presence is to be regarded as nature's defensive reaction and method of bringing the disease to a natural and fortunate termination; and although like so many reactions even that of fever may be excessive and fraught with its own dangers, yet our safest plan is not hastily to interfere with the indications furnished by that safest of all guides—nature herself.

Leaving for a time the various methods of treating fever, it would be an easy task, and one which might conduce to a little needful humility in matters medical, to refer to some of the various ways in which from time to time fashion has swayed pathology, diagnosis, and treatment—the manner in which it has influenced the drugs we have administered, the dietary we have advised, the quantity and form of alcoholic stimulant we have sanctioned, and the special climate, watering-place, or health resort we have recommended. What an opening is afforded for the medical cynic by the way in which newly discovered drugs are boomed, recommended as remedies in every possible disease, and lauded as sovereign cures for a dozen diverse conditions, utterly forgetful of the fact that most medicines are successful when the patient is tending to recover or is merely suffering from some temporary functional disturbance. Finally, in a longer or shorter time most of these much vaunted drugs are consigned to oblivion until possibly their virtues are rediscovered by some future investigator. A whole address might easily be devoted to a record of the different pathological views held as to tubercle and phthisis and an account of the various remedies advocated for their cure, from the specific of some obscure empiric whom we contemptuously designate a quack up to the scientific remedy elaborated by some leading pathologist whose discovery, under most august and imperial patronage, sets the whole civilised world in a flutter of excitement until it, too, is relegated to the limbo of useless discoveries. Of course, in these up-to-date times it is beneath us to read old books. We are content to pay large prices for them as curiosities for our libraries, just as we do for the skeleton of a dodo to preserve in a local museum; otherwise Jonathan Swift's account of the philosophers and projectors in the Academy of Laputa might even now be found interesting and not unprofitable reading.

Just at present there are two especially fashionable tendencies in medical treatment. The first is the use of antitoxins and animal extracts; those of us who are not unnecessarily sceptical may, in fact, look forward to the medicine of the future being enormously simplified, somewhat on the following lines. Most diseases will be grouped under two heads, those in which some organ or tissue is diseased so that its internal or external secretion is suppressed or altered and those due to a micro-organism or the toxin produced by it. In the first case the treatment will, of course, be the administration of the suitable animal extract; the remedy is ready to hand, for already, according to a recently published work, we can select from extracts of bone marrow, lymphatic glands, heart muscle, brain, spinal cord, kidney, liver, pancreas, parotid, pituitary body, spleen, suprarenals, thymus, thyroid, and even other less likely organs. Such is the vast superstructure which has been built up on the success of the thyroid treatment; again the old fallacy that because one animal extract has done good others will be equally useful. If, on the other hand, the body be invaded by a pathogenic micro-organism it will only be necessary to inject the requisite antitoxin—that of cholera, diphtheria, glanders, plague, rabies, septicæmia, tetanus, tubercle, pneumonia, typhoid, &c., &c., as the case may be. How delightfully simple will therapeutics be in the future.

[Dr. Carr here argued at considerable length that the highest function of medical practitioners is not to attempt to cure diseases by means of specifics but to be apostles and preachers of hygiene. He continued:—]

Any consideration of the recent developments and tendencies of medicine would obviously be incomplete without some reference to the extraordinary growth within the last generation of the nursing system, to which all medical men owe so much. For the present nursing and nurses of our great hospitals and of an increasing number of our large infirmaries there is little but good to be said; of course they are not perfect, because no individuals are perfect, and doubtless there are slight differences in the standard of efficiency in various institutions. Necessarily also the presence of medical students in a hospital introduces fresh difficulties and complications. We now recognise the trained nurse as an important factor not only in hospital but also in social and domestic life. There has been during the last few years an enormously increased demand for and a proportionately increased supply of, nurses in private work, and it is in this direction, I think, that a danger exists of the movement being carried too far, and with any such excess comes necessarily in the future the even greater danger of a disastrous reaction. As nurses increase so enormously in number there is almost inevitably a falling off in quality. Some nurses again, and not a few in private employment, are in danger of thinking of themselves more highly than they

ought to think; as has been well said, they have a profound contempt for the general practitioner, barely tolerate the physician, and have a real respect only for the operating surgeon, provided always that he uses the particular dressing to which they have been accustomed. What their feelings would be towards a female practitioner I cannot find adequate words to express. Perhaps the most serious danger of all is a growing tendency towards allowing the nursing of the sick in the houses of the middle classss of our country to pass entirely into the hands of strangers, so that domestic nursing is likely to become a thing of the past. I do not speak of the upper classes, for the smart ladies who try to escape the cares and troubles of maternity are not likely to seek the responsibilities of nursing either their husbands or their children and amongst such trained nurses are a necessity, but with the middle classes it is different and one great feature of woman's influence in the home will be lost if she wholly abandons to strangers the nursing of those near and dear to her and especially the nursing of her children when ill.

My surroundings to-night urge me to inquire into the position and future of one of the latest, and to many here the most important, of all recent medical fashions—the movement which has led to the medical education of women and which brings us together now. Is this to be only a passing fashion, like others to which reference has been made to-night, or is it a true and natural evolution, destined to grow to greater proportions and to take a permanent place in the future history and progress of medicine? I can imagine that many will think it very superfluous to ask such a question at a moment when the cause, having successfully weathered the storms and perils of its earlier years, seems now to be passing into the sunshine of prosperity: when royalty smiles upon and gives its patronage to the movement; when the number of students is steadily increasing; when a new medical school is rapidly rising to bring to the highest attainable standard of excellence our professional education; when public bodies all over the kingdom are throwing open appointments to our graduates; when the Indian Government, the Post Office, the Metropolitan Asylums Board, the London County Council, and boards of guardians in all parts of the country alike welcome the services of the medical woman; and when the opponents of the movement maintain from their last stronghold in that most exclusive, conservative, and aristocratic of medical bodies, the Royal College of Physicians of London, a hopeless and almost pathetic resistance, well knowing that the fates are against them and that though they may retard they cannot much longer hold out against the flowing tide of public and professional sentiment. Nevertheless, our cause is even yet not so firmly established that we can afford to be in the slightest degree negligent or careless. In the early days when openings were few and obstacles many the quality of our students was, I think, proportionately high; difficulties attracted and developed—as difficulties always will—a strong and indomitable race; but when good fortune and popular favour await us—when our movement, in short, becomes fashionable—then comes the danger that though the number of our students may increase there may be a falling off in quality. When women begin to come here not for genuine love of medicine, not with earnest purpose of work, not with a fixed determination to overcome all obstacles and surmount all difficulties, but because it is fashionable to come, because it is a recognised mode of passing time which hangs too heavily, of obtaining a larger measure of freedom, or of escaping from a home which for some reason or other has become uncongenial; if the work is pursued in a merely dilettante spirit, if students enter and, worse still, become qualified, whom nature never intended for medical pursuits, then indeed our position will be in jeopardy and a reaction might speedily arise which, if it did not submerge the cause, might easily set it back many a year. In a more than ordinary degree, therefore, a great responsibility rests upon each individual student here, as indeed must always be the case with the pioneers and early adherents of any comparatively new movement, no matter what its character, be it religious, educational, philanthropic, political, or social. Collectively you are somewhat in the position of a young practitioner just established behind a brass plate who is called upon in an emergency to attend a new patient as compared with the old-established family medical attendant. In the latter all kinds of eccentricities and even trivial errors will be overlooked or condoned—if he has once gained the family confidence and respect he will not easily forfeit it; whereas in the young practitioner the slightest indiscretion, the most venial mistake, may be sufficient to ruin his reputation and wreck his career, however promising. As it is with the youthful practitioner individually so it is with the cause of medical women as a whole. Amongst male practitioners the public recognise that there are sure to be some failures, some doubtful characters, some foolish or ignorant persons, some disreputable individuals, and the existence of a few such does not materially injure the reputation or position of the profession as a whole; but, for the present at any rate, whilst the women's movement is still young, were there to be any serious falling off in the character and quality of the students, were we to send out into the world practitioners ill-qualified or unsuited for their work, were any medical women to be guilty of serious moral or professional indiscretion or to show themselves unworthy of the responsibility thrown upon them, then we may be assured that a thoughtless and indiscriminating public would at once jump to the conclusion that female practitioners were a failure. Once again, therefore, I would most earnestly impress the immense responsibility which rests upon each one here, first of all during student life and still more when, duly qualified, you have to act on your own resources, being assured that any untimely frivolity, any want of tact or discretion, any carelessness or dereliction of duty, will not only injure your own professional career but may seriously damage the entire cause of the medical education of women; for instance, anyone who is a failure in a resident post in a hospital, infirmary, or asylum will almost certainly ensure that post not being again given to a woman and will probably prevent other similar openings being provided in the near future.

In one respect at least medicine must ever be the most trying of vocations, because to us is entrusted that greatest of all responsibilities, the responsibility for human life, and we need ever to keep before us the fact that whilst in so many of our cases life hangs in the balance and the smallest factor may turn the scale this way or that, yet the flickering spark which the least mistake may so easily extinguish, no skill, no effort, no devotion, no regret of ours can ever restore. I urge you, then, to use every advantage and every opportunity of acquiring knowledge during your hospital career, so that in after-life you may never have the painful recollection of neglected opportunities in student days.

ST. THOMAS'S HOSPITAL.

AT this hospital no address was given by a member of the medical staff, but on Oct. 3rd, in the presence of a large audience, the Bishop of Rochester, presented the prizes won during the recent examinations at the school. Mr. WAINWRIGHT, the treasurer, who presided, said that we lived in times when we could not stand still, and no one, he thought, could say that that institution had stood still, for during the last twenty years the hospital had been the centre of great activity. They had only recently established a clinical laboratory, which was unique of its kind in London, and would be of the greatest utility in assisting students to carry on their work. They had during the year reopened another ward which would provide increased accommodation for 150 patients a year, while they were opening another ward which was to be christened the City of London Ward. He wished it to be known that that was a City hospital and hoped that the example set by the Mercers' Company in giving them £10,000 would be followed by other City bodies.—The prizes having been distributed the secretary, Mr. G. RENDLE, pointed out that during recent years large sums of money had been spent on the schools, and consequently it was not anticipated that any further considerable expenditure would have to be incurred for some time to come.—The Bishop of ROCHESTER in his address said he had always felt the close affinity between the medical and clerical professions. Both were constantly acquainted with the more squalid and less attractive side of human life and both could not protect themselves, as members of some professions could, by rules, but they had to be always ready at every call, and family comfort, rest, and even health, had often to be sacrificed to the call of duty. Beyond that also he found the work of the two professions similar, as they both aimed at wholesome life.

THE Pharmaceutical Society of Great Britain is closely allied in its work with one side of the work of the medical schools, and we have pleasure in publishing an abstract of Sir James Crichton Browne's address to students delivered

before the society at the opening of the winter session. We also give a brief *résumé* of Mr. Walter Long's remarks at the Royal Veterinary College.

PHARMACEUTICAL SOCIETY OF GREAT BRITAIN.

INTRODUCTORY ADDRESS BY SIR JAMES CRICHTON BROWNE, M.D. EDIN., LL.D. ST. AND., F.R.S., ON "POISONS AND POISON LEGISLATION."

GENTLEMEN,—It is my privilege this afternoon to address to you a few words of exhortation and encouragement on the occasion of your entering on a course of study which is the appointed avenue to that manor of usefulness in which you propose to dwell and earn your subsistence. I cannot in doing this hope to speak to you with the insight and exactitude of one who has actually followed the calling which you have chosen, but I can, at any rate, bring to the performance of the duty I have undertaken a sympathetic interest in your life work and a knowledge of its needs, trials, and opportunities second only to that of those who have personally borne the burden of them. For the view which a medical man takes of the business of the pharmacist is not altogether exoteric. He has been behind the scenes if not the counter; the mysteries of the mortar are well known to him; the language of drugs is ever on his lips, their actions and reactions daily occupy his thoughts, and the responsibility attaching to their use weighs upon him incessantly. It is indeed sometimes difficult to say where the medical man ends and the chemist and druggist begins, and while, for my own part, I trust that the line of demarcation between them will become more and more sharply defined as time goes on, so that we shall have fewer prescribing chemists on the one hand and fewer dispensing medical men on the other, there must always remain a close alliance between your calling and mine. They have common aims, they use the same weapons, they are complementary to each other, and it is to be hoped that they will be always animated by mutual good feeling.

[Sir James Crichton Browne here referred to the raising of the standard of education for dispensing chemists which had been brought about of late years. He continued:—]

But while we rejoice at the rectification and sublimation of chemists and druggists that is going on we must see that this process is not carried too far or unduly accelerated. In this, as in so many other matters, it may be well to hasten slowly, for, remembering the very special circumstances under which the studies of embryo chemists and druggists are carried on, there would seem to be a special danger in submitting them to sudden or severe mental strain. They are earning their bread all the time; they are able to give to their studies but brief periods carved out of toilsome days; they bring to them brains, not fresh and nimble, but fatigued and sluggish; they pursue them, not with entire devotion, but harassed by the petty troubles of the shop, and they are liable, therefore, to be injuriously affected by a degree of mental pressure which would be harmless and even stimulating to young men who have nothing but their studies and their pleasures to attend to and whose daily life is ordered with a single eye to their schooling. We are suffering largely in this country to-day from stupidity which has been manufactured by examinations, and I do not doubt that a point may be reached in the examination of chemists and druggists which will conduce rather to dulness than alacrity of thought, which will sacrifice to temporary mental engorgement, with a subsequent life-long disgust at learning in any form more concentrated than the newspaper, the well-regulated and wholesome nutrition of all the faculties and an enduring appetite for knowledge, and which will at the same time stunt bodily growth and sow the seeds of ill-health. I do not for one moment suppose that the examinations to which you are exposed have reached that point or are approaching it. As far as I am able to judge they are moderate and reasonable. I only wish to indicate certain risks which lie ahead—risks which will, I trust, as they arise, be obviated by the wisdom and caution of the Council of the Pharmaceutical Society.

[Sir James Crichton Browne then discussed the examinations in question. The first, he said, was quite a reasonable one; the second, the "minor," examination, might, he suggested, be divided into two parts, and he earnestly entreated all masters to see that their apprentices had plenty of time not only for study but also for that leisure without a sufficient supply of which good work is impossible. As to the "major" examination, although it was not necessary that it should be taken yet he hoped that more and more persons would continue to avail themselves of it. After referring in laudatory terms to the work done by the Pharmaceutical Society in bringing out the new British Pharmacopœia Sir James Crichton Browne continued:—]

Another notable event of this year in your department besides the appearance of the new Pharmacopœia has been the addition to the statute-book of a Pharmacy Amendment Act, which, owing to the determined exertions of your President, Mr. Walter Hills, has survived the slaughter of the innocents. It is a modest measure providing for the election of apprentices or students as Student Associates, and for registered chemists and druggists as Members of the society, and for the retirement by rotation of members of the council, and I have no doubt it meets felt requirements. Unlike all previous pharmacy enactments it has nothing to say about poisons, which have invariably been the real motive power in legislative measures affecting your trade. It is not so much as pharmacists as vendors of poisons that you have secured the attention of Parliament, and as that branch of your avocation is the most anxious and hazardous of any, has a peculiar interest for the public, and is very likely to be made the subject of a Bill next session at Westminster, it occurs to me that I may not inappropriately make poisons and poisoning the theme of some remarks to you this afternoon.

What, it may be asked, is understood by the term "poison"? And the first answer to that question which presents itself is any substance that, when introduced into the body, produces injurious or fatal effects. But for practical purposes that definition is much too comprehensive, for certain articles of food and drink, when taken too freely or in disordered states of the system, or by persons of peculiar idiosyncracies, may prove detrimental and even kill, while almost all the drugs in common use, if given in excessive doses, may cause symptoms of poisoning and death. The question of quantity enters into our conception of a poison which may be described as a substance which in small amount and by chemical action has hurtful or lethal effects on the animal economy. This description cannot pretend to strict accuracy, for some poisons perhaps act mechanically, as, for instance, certain microbes which block up the blood-vessels, and ground glass, which in some parts of the world has not infrequently been used as a slow irritant poison. But the vast majority of poisons destroy the living tissues by means of chemical action. Even thus restricted, however, the word "poison" covers a multitude of agents, for on every shelf in your shops stand chemical assassins capable in small bulk of undermining health or taking life. Indeed, so numerous are the drugs which must be scientifically regarded as poisons that it has been said that to select and schedule a few of them which may not be sold without reservations while the rest are left unguarded is like prohibiting the carrying of knives while allowing stilettos. But although, as you and I know very well, there remain outside Schedule A many drugs as mortal as any included in it, and more difficult of detection, and although with the advance of science the field from which the poisoner may cull his simples is ever widening and becoming more variegated in its crop, it must still be maintained that Schedule A has done great public service. It may be logically indefensible, but it is practically useful. During the present year we have had an illustration in the St. Neot's case of the way in which a faithful observance of the regulations connected with it may bring a criminal to justice, for it is quite likely, I think, that Horsford would have escaped conviction had Mr. Payne failed in keeping an accurate record of the sale of the strychnine to him. As a matter of fact, the poisons enumerated in Schedule A are those which have been, and are almost invariably, employed for felonious purposes.

In looking over the history of poisoning—I am speaking now of homicidal poisoning—nothing strikes me more than the way in which this kind of history repeats itself from generation to generation. The same old implements are used again and again and there is an absence of anything like originality or ingenuity in the choice of ways and means. Servile, clumsy imitation is the rule and fashion reigns supreme. Little or no advantage has been taken of the discoveries of science. No doubt we hear about the subtleties and mysteries of slow and secret poisonings in bygone times. We are told that Henry VI. was killed by a pair of poisoned gloves and that victims were in those days simply and expeditiously got rid of by causing them to smell

a poisoned rose or to wear or suck a tainted ring like the one that now figures in "The Termagant" at Her Majesty's Theatre, but such stories are on a level with those which we sometimes read in the newspapers of the instantaneous production of insensibility by holding a chloroformed handkerchief to the nose: they are simply incredible. We cannot believe that in pre-scientific days unscientific persons were in possession of powerful agents of which modern science knows nothing, and when we investigate such cases of secret poisoning in these days as we have any record of, we find, as I have said, that there was nothing occult or wonderful in the process and that in nine cases out of ten it was some preparation of arsenic which was employed. It was arsenic which was used by Wonderton in 1384 in his attempt to poison the King of France, Charles VI., and the Dukes of Valois, Berri, Burgundy, and Bourbon. It was arsenic which was the active constituent in La Sarpa's wonderful elixir that played such havoc in Rome in the seventeenth century; it was arsenic which formed the basis of the *acquetta* or manna of St. Nicolas of Bari and of Toffania of Naples, which caused the death of 600 persons; and it was arsenic which was the leading ingredient in the succession powders of Sainte Croix, which were used by the Marquise de Brinvilliers, and with which she removed her father, two brothers, a sister, and several other persons. It was arsenic which was no doubt mainly instrumental in carrying off Sir Thomas Overbury in the Tower, although in his case it was combined with cantharides, lunar caustic, and spiders—the *coup de grâce* being given by corrosive sublimate. Wherever we turn in mediæval toxicology or that of the Renaissance it is arsenic, arsenic, arsenic, which was the mainstay, not merely of the murderous fortune-telling hag, but of homicides of commanding intellect and power, like the Borgias and Catherine de Medici. Of course, in those days, and well up to the early part of the present century, it was impossible to distinguish arsenic with any certainty in the bodies of persons who had died from it, while only the vaguest notions prevailed as to the pathological effects caused by it in the viscera, so that it could be used as a poison with considerable impunity. But since Orfila, Reinsch, Marsh, and others have carried out their researches it has become of all poisons the most easily recognised by chemical tests, while its symptoms and morbid anatomy are familiarly known to the medical profession. And yet, notwithstanding this, it is still, no doubt owing to the facility with which it may be procured and its old-established reputation, a favourite with the homicide. Mrs. Cotton, who was executed at Durham in 1873, was arraigned on four separate charges of poisoning by arsenic. Mrs. Maybrick was convicted of having administered it to her husband in 1886. Mrs. Sherman, of New Haven, United States, was proved at her trial in 1885 to have disposed of three husbands and some seven or eight children and step-children by means of it, while in the same year Mrs. Robinson, of Somerville, Massachusetts, was shown to have been indebted to it for the disappearance of six members of her immediate family. I am sorry to have to say so, but it is true that women and medical men are the classes which have supplied the most numerous and most notorious poisoners. Man—in this connexion *minus* medical men—bold and militant, is disposed to crimes of violence; woman, weak and timid, when she stoops to crime inclines to craft and cunning, and hence she has often sought, by the arrow that flieth in darkness, to remove a rival, to resent infidelity, to avenge her wrongs, to hide her shame, or to gratify her cupidity. At certain periods poisoning by women has been epidemic and has anticipated the decrees of our modern divorce court. About the middle of the seventeenth century it was observed that young widows were extraordinarily abundant in Rome, and that most of the unhappy marriages were speedily dissolved by the illness and death of the husband; and inquiries set on foot by the clergy, who felt bound to make representations to Pope Alexander VII., resulted in the discovery of a secret society of young matrons, who met at the house of a reputed sorceress for technical instruction in toxicology and mutual improvement in marital euthanasia. A little later a similar organisation was brought to light in Paris, again by the action of the clergy, and here it was shown that under the guidance of two nominal midwives, La Voisin and La Vigoroux, large numbers of married women had hastened the decease of their husbands. It was not until upwards of a hundred culprits of this description had died at the stake or on the gallows that this epidemic was stamped out. In Hungary, in the latter half of the seventeenth century, and again only a few years ago, extraordinary disclosures were made as to wholesale husband poisoning by women of the peasant class who, like the Roman and Parisian matrons, employed arsenic to compass their ends.

We can understand in some measure the partiality of female poisoners acting individually and in numbers for arsenic, and their rigorous adherence to ancient methods by remembering that arsenic has long been employed in many countries as the most popular domestic exterminator of vermin and has also been extensively recognised as an article of toilette, so that women have been able to obtain it and explain their possession of it on these pretexts; but it is difficult to comprehend why poisoners of the other group alluded to, medical men, should have displayed such poverty of resource as is manifest in their published misdeeds and should have confined themselves so strictly to the contents of Schedule A. One would have thought that medical men, with their knowledge of drugs and command over them, would have been able to ring the changes in an infinite variety of ways and to employ alkaloidal and other organic poisons in such a manner and in such combinations as to perplex the clinical observer, baffle the pathologists, and set at nought the skill of the analyst. But not so. With what might almost be called infatuation they have all but invariably worked on in the old grooves and carefully prepared a net for their own ensnarement. For the most part they have trusted to the inorganic poisons, which, owing to their unalterable character, ease of purification, and definiteness of reaction, can be identified in the body with mathematical certainty; and when an alkaloid has been essayed it has been strychnia, which, of all the alkaloids, in unalterability and definiteness of reaction, approaches most closely to the inorganic poisons, and to which, too, very conclusive physiological tests can be applied. The rarer and more fugacious alkaloids, which I am not even going to name, and which when detected it would be impossible to affirm might not be putrefactive products—ptomaines, albuminoses, and peptones which result from the decomposition of the tissues or of ingested food—have, as far as we know, never been tried, and even nicotine, the most widely diffused of alkaloids, with which, I suppose, a third of the population is always poisoned more or less has not been resorted to with premeditated malice except in one case—that of Count Bocarne, who poisoned with it in five minutes his wife's brother, Fougnies, although in the body of a murdered smoker it might well pass as a relic of the pipe or cigarette. I cannot recall a case in which a medical poisoner has gone beyond Schedule A. Palmer used strychnine, Smethurst used antimony, Pritchard used antimony, Cross used arsenic, Lamson used aconite; Chantrelle, who, although not a medical man was a chemist, used morphia; and Tawell, who was a chemist and druggist, used hydrocyanic acid. Such are the ignorance, stupidity, and rashness revealed in a review of the trial of these medical poisoners that one is forced to conclude that they were like the miscreants who carry on illicit lines of practice at the present day—medical men only in name, professional pariahs and failures beneath contempt, and that in them, as in the criminal classes generally, intellectual incapacity was associated with moral debasement. Not one instance have we amongst them of average ability, to say nothing of originality or genius, in their nefarious transactions. True, it may be said that the medical poisoners who have been brought to justice have been the clumsy and incompetent members of their class. The bunglers, it may be argued, have been caught, while the adepts have escaped suspicion. It is, I fear, correct that there have been and are cases of undetected poisoning. In almost every instance in which a medical poisoner has been convicted there have been good grounds for believing that he had had other victims besides the one whose death was brought home to him, and several medical men in large practice have told me that in their professional experience they have come upon cases in which they have had grave misgivings that poisoning was being or had been attempted. It may be that medical men have availed themselves of the discoveries of modern science for wicked and unlawful ends and have lived on in the odour of professional sanctity unsuspected; but there is some consolation in the reflection that the more scientific a man is the less likely is he to stoop to any abuse of power that science puts in his hands; and that the improved education of the medical profession renders its members more expert than they have hitherto been in the recognition of the symptoms

of poisoning of various kinds. But here I must point out to you that as regards the future of toxicology very serious considerations arise, for numerous new poisons are being yearly added to our list, and many of these it is and must perhaps always be impossible to track and identify. Henceforth the medical man or scientific expert desiring to remove any human stumbling-block in his way, if able to shake off old traditions, will not, unless demented, select his weapon from Schedule A, but from the recently discovered organic poisons that may be used with absolute impunity as regards detection.

[Sir James Crichton Browne here entered on the question of disease toxins and pointed out how the poisoner of the future would in all probability use these agents as the ministers of his vengeance. He continued:—]

You will admit, gentlemen, I think, after what I have said that the science of toxicology is becoming infinitely more complex and intricate than it has ever hitherto been and that very difficult and curious problems are not unlikely to arise in connexion with it in its relation to medical jurisprudence, problems that may puzzle the discernment of even a twentieth-century Sherlock Holmes. "Chemists," exclaimed Count Fosco with an eye to their toxicological attainments—"Chemists—I assert it emphatically—might sway if they pleased the destinies of humanity. ..... On my sacred word of honour it is lucky for society that modern chemists are by incomprehensible good fortune the most harmless of mankind. The mass are worthy fathers of families who keep shops. The few are philosophers, besotted with admiration for the sound of their own lecturing voices, visionaries who waste their lives on fantastic impossibilities, or quacks whose ambition soars no higher than our corns. Thus society escapes and the illimitable power of chemistry remains the slave of the most superficial and the most insignificant ends." But if Count Fosco thus estimated the empire of chemistry and the boundless power which it places in the grasp of its votaries, what would he not have said of bacteriology and of the hidden and thaumaturgic control over their fellow-men which those initiated into its mysteries possess? Into what rhapsodies would he not have risen over these microbic poisons of superlative virulence and subtlety to which we have now attained, the very existence of which may suggest to you that it is superfluous any longer to surround with special safeguards the sale of such comparatively harmless substances as are contained in Schedule A. But in entertaining any such suggestion you would be in error, for whatever the future—the remote future—may bring forth it is certain that for a long time to come a large majority of poisoners will cling to old methods and stake their necks on arsenic, antimony, and strychnine. For one bacteriological Mephistopheles who can possess himself of a microbic poison and use it dexterously there will be at least a dozen despicable wretches who will take what comes to hand most readily in common life and blunder with it egregiously. And beyond all this we must remember that Schedule A is not intended solely for the prevention of murder but is meant to act as a check on suicide and to avert, as far as may be, deaths due to carelessness and accident. Those bent on self-destruction are not likely, unless to cheat an insurance company, to attempt to induce a lingering illness or to seek out an inaccessible and inscrutable toxin, but are certain to prefer "such soon-speeding gear" of yours "as will despatch them straight," and the obstacles which this schedule enables you to put in their way may occasionally frustrate their object or afford them that brief interval for reflection in which the suicidal impulse, when it has reached a crisis, often suddenly dies out. And independently of this schedule, members of your calling are, I believe, not rarely instrumental in preventing miserable beings from shuffling off this mortal coil, for some of them have acquired a quick eye for a would-be suicide and, as in instances which have fallen within my own knowledge, by refusing altogether to supply him with the poison asked for or by substituting for it an innocuous fluid or powder not unlike it in appearance have given him pause and so saved his life. Then, as regards accidental poisoning, which has become more frequent in recent years as the demands of our advancing civilisation have become more complex and various, there can be no doubt that the provisions of the Pharmacy Act, when rigidly observed, tend to limit it, and that they will be still more efficacious in this direction when the recommendation which the Pharmaceutical Society of Great Britain has repeatedly pressed upon the Privy Council to include in the schedule carbolic acid, to which so many deaths are now attributable, has been adopted. A Bill to regulate the sale of certain poisonous substances was introduced into and passed through the House of Lords last session, but failed, I cannot regret to say, to pass the House of Commons, for the Bill seemed to me to be retrogressive in permitting the sale of the substances named in its schedule and of others that the Privy Council might from time to time add thereto, subject to certain regulations, by any person without any licence or evidence of special qualification. The sale of poisons hitherto has been confined to chemists and druggists, who have been trained to caution in dealing with dangerous commodities and who have proved their fitness for such work by passing a stringent examination, and the wise policy would seem to be to entrust to them the sale of other poisonous substances which have come into vogue and in regard to which the public require protection. No regulations, however carefully worded, can make up for the want of knowledge and a sense of personal responsibility, and free trade in poison is not to be desired any more than free trade in alcohol. Labelling alone is not a sufficient safeguard and indeed it may be argued that whenever it becomes very general in its use it will in great measure cease to be protective, for familiarity breeds contempt, and the warning word "Poison" is apt to lose its effect when it is incessantly cropping up. The fact that a particular substance has to be procured at a druggist's shop with certain formalities is, to my thinking, much more likely to create caution in its storage and use than the most flaring superscription of poison if it can be purchased of any ordinary dealer. Of course, one would wish to put no unnecessary obstacle in the way of the distribution of carbolic and cresylic acids, which are so largely used as disinfectants, or of the materials sold for the purpose of destroying insects and vermin, which are now acknowledged to play some part in the dissemination of disease, but it should always be borne in mind that cleanliness is the best of all disinfectants and vermin-destroyers and that sound sanitation should render the use of chemical antiseptics only occasionally necessary. There can, I think, be no hardship in confining the sale of these chemical antiseptics to properly qualified chemists and druggists; indeed, there would seem to be great danger in permitting them to be retailed under any conditions by grocers, by drysalters, by oilmen, or by general dealers, in whose shops they would necessarily be mixed up with various other kinds of goods, in regard to the vending of which no special care is requisite. The habitual caution of the chemist and druggist counts for much—an habitual caution which has become second nature to him and enters into all his doings, even, I fancy, into the sale of a sponge or a bottle of perfume; for anyone who has bought such an article over a chemist's counter must have felt that the transaction was conducted with great circumspection and solemnity and that in making the purchase he was regarded almost as an object of suspicion.

I venture to believe that all the advantages sought by the Bill of last session could be secured by the inclusion of the substances named in its schedule in Schedule A of the Pharmacy Act and I feel strongly that the Council of the Pharmaceutical Society of Great Britain should continue to advise the Privy Council as to the articles to be comprised in that schedule. The Privy Council must have special technical guidance in such a matter and I know not where they could obtain more trustworthy guidance than from the chosen representatives of that body of men who have an intimate practical acquaintance with all the difficulties and dangers attending the sale of poisons and who will not, I am sure, allow their trade interests to stand in the way of the public welfare.

[After mentioning recent researches as to antitoxins Sir James Crichton Browne proceeded as follows:—]

Step by step, armed with our antitoxins and our serums and our lymphs, we are encroaching on the ghoul-haunted regions of disease and bringing hope and healing where before all was darkness and despair. There is no extravagance in the prediction that all the infective diseases will before long be brought under control more or less and have their power of evil vastly restricted if not abolished. And that means more than might at first sight appear, vast although even then is the prospect of benefit to mankind, for diseases hitherto not regarded as infective are being brought into that category or shown to be of toxic causation and therefore amenable to our new methods of treatment. Should it prove, as Nissl and Mr. Lane Hamilton have alleged, that

a considerable number of cases of mental disease are due to auto-intoxication, the antitoxins may be instrumental in checking that alarming increase of insanity which is going on amongst us and which statistical ingenuity can no longer explain away. Should Dr. Westura Sambon be correct in maintaining that sunstroke is an infective disease we shall shortly be combating insolation by an antisiriasic serum. If Dr. Buzzard is right in arguing that anterior poliomyelitis is due to a bacterium we shall soon teach that bacterium to circumvent itself and leave little limbs unwithered. It is within the bounds of possibility that by means of an antitoxin we may yet restrain the course of cancer, that "perilous stuff which weighs upon the heart" of the present generation, for we may counteract a poison which it generates and which is perhaps more pernicious than the structural changes associated with it. And this brings me to a consideration in connexion with antitoxins which should not be omitted in any survey of their therapeutic powers, and that is that in some instances, besides saving life, they mitigate the sequelæ which infective diseases so often leave behind them. Given, therefore, to patients who might survive without their aid they still promote speedy and complete recovery by warding off secondary structural alterations in muscle and nerve fibre and in the viscera. We are all aware of the disasters which small-pox leaves in its trail—blindness, deafness, and lameness, although, happily, we see less of these than our forefathers did and than our children may do, unless the faddists be effectually muzzled and effect given to the conscientious objection of the country to the conscientious objector. We know something of the kidney disorders and disorganisation of the middle-ear which so often follow on scarlet fever and of the paralysis which dogs the footsteps of diphtheria, but perhaps we scarcely realise that every infective disease leaves its mark upon the system. I have heard the late Sir William Gull say—and most of his sayings were worth remembering—that it takes a man ten years to recover perfectly from an attack of typhoid fever, and it is certain that the health and happiness and kinetic energy of the community at large will be sensibly augmented by the employment of medicaments which not merely diminish the mortality of a large group of diseases but limit their secondary ravages.

[Sir James Crichton Browne then proceeded to the question of prevention in disease by means of immunisation. Vaccination had done immense damage to the trade of the dispensing chemist, but yet everyone would, as medical men did, hail with delight any falling off in their earnings that corresponded with a prolongation of human life. He continued:—]

When I stood on the brink of this address I proposed to myself, after a few preliminary remarks, to plunge into a subject of some depth but of great allurement and of special interest to you in relation to your present studies. I proposed to speak to you of a great philosopher who was also a practical pharmacist and to show you how Bishop Berkeley's treatise on Tar Water, published in 1744, has a bearing on the medicine and surgery as well as on the speculative thought of to-day. But my preliminary remarks have run away with me. What have, I fear, proved the ill-favoured and lean-fleshed kine of my introduction have eaten up what I flatter myself must have proved the well-favoured and fat-fleshed kine of my main discourse and I find myself beyond bounds both as regards time and your patience without having as much as mentioned Berkeley's name. I must postpone, therefore, to some future opportunity what I have to say about "Siris," its rational empiricism, its optimism, its curious antiseptic anticipations, its learning, its lucidity, and its marvellous chain of philosophical inquiries and reflections, leading up from a humble nostrum to the throne of the Divine Ruler of the universe. Meanwhile I may recommend it to the private reading of such of you as are not afraid of metaphysics, sure that you will find food for thought even in its therapeutical extravagance, and that it will help you in some measure to escape from that dreary materialism to which your avocation perhaps somewhat disposes you. Its pure and lofty idealism, which you may trace flowing on in a continuous and differently reflective stream in the writings of Carlyle and Emerson, may help you, as it has helped many a man, to lay hold of a sustaining faith. Berkeley said, "He who hath not much meditated upon God, the human soul and the *summum bonum*, may possibly make a thriving earthworm, but must indubitably make a sorry patriot and a sorry statesman." It is not, perhaps, within your visions of your lot to be statesmen, but one and all of you should aspire to be good patriots and something more than thriving earthworms and in all your laudable ambitions "Tar Water" will prove a safe stimulant and roborant. Let me thank you for the indulgent audience you have given me and wish you all with all my heart a prosperous and pleasant journey on the road which is opening out before you.

THE ROYAL VETERINARY COLLEGE.

REMARKS BY MR. WALTER LONG, M.P., PRESIDENT OF THE BOARD OF AGRICULTURE, ON TUBERCULOSIS IN CATTLE.

AT the Royal Veterinary College the inaugural address to the students was delivered on Oct. 3rd by Mr. SHAVE, Professor of Anatomy in the College.

Mr. WALTER LONG, who presided over the meeting, in reply to a vote of thanks for taking the chair, said that he believed the veterinary profession could do a great deal to forward the movement of diminishing tuberculosis apart from any step which it might be necessary for the Government to take. All that the Royal Commission recommended that the Government should do was, in the first instance, to provide tuberculin at what would be, comparatively speaking, small cost, and, in the second place, to pay the fee in order to secure properly qualified veterinary surgeons to carry out the operations. The Royal Commission estimated that the cost of the tuberculin would be 3*d*. per dose and that of the individual testing application to cows another 2*s*. 3*d*., making a total of 2*s*. 6*d*. for each case. He did not in any way seek to evade responsibility—that must always rest on the Executive Government in matters of this kind—but he now said what he had stated elsewhere that if he could only be satisfied that there was a general desire to make use of this particular remedy there would certainly be no unwillingness on his part to obtain the necessary consent of the Government to grant the fee. He would, however, like to impress on them that if a remedy of this kind was as effective as science alleged, surely it could hardly be necessary for the Government to pay the 2*s*. 6*d*. per cow in order to induce the owners of horned stock to take advantage of it. The real truth of the matter was that the men who had the scientific knowledge did not make sufficient use of the opportunities presented to them to infuse their own beliefs and confidence into the minds of the general public. This was one of the most important discoveries which had ever been made, because if it were carried out with the success which was foretold, not only would it eradicate the disease which was causing great loss to the owners of stock, but scientists told us that simultaneously would come the eradication of consumption among human beings, which had brought sorrow to so many homes and which had for so long been regarded as an incurable disease.

THE PREVENTION OF TUBERCULOSIS.[1]

BY CHARLES EGERTON FITZ-GERALD, M.D. ST. AND.,
PRESIDENT OF THE FOLKESTONE MEDICAL SOCIETY.

THE time is, it is to be hoped, fast approaching when the medical profession will assume its proper position as guide, philosopher, and friend, not only to the individual, but to the community at large. There are already indications in America, Germany, and elsewhere that public opinion is trending in the direction of not only allowing medical men to offer advice as to the prevention apart from the cure of disease, but also to enforce its acceptance. Already something has been attempted in this direction by the passing of the Contagious Diseases Act, the Vaccination Act, and the Infectious Diseases Compulsory Notification Act. The first two have unfortunately been stultified and nullified in obedience to the mischievous outcry of a minority of well-meaning but ignorant and sentimental faddists. The Compulsory Notification Act requires to be more comprehensive, and especially should it be rigidly enforced in all cases of tuberculosis. Why should not we in England

[1] A paper read before the Folkestone Medical Society.

follow the noble example so admirably and successfully inaugurated in New York by Dr. Hermann Biggs, Dr. Loomis, and Dr. Mitchell Prudden in combating this fell disease? The greater number of the following observations are founded on the reports of this excellent work which have been placed at my disposal by Dr. Hermann Biggs. Of course, there would be at first the usual outcry about interfering with the liberty of the subject, but such protests are comparatively harmless, as has already been proved in America, where there is little or no opposition to the rigorous enforcement of the law by the New York Board of Health. The liberty of the subject has to be curtailed in the case of individuals who are imperilling the safety or lives of the community; why, then, should there not be restrictions on those who, by their carelessness, ignorance, or wilfulness, entail sickness, suffering, and death on millions of their innocent fellow-creatures, aye, and on millions yet unborn? Syphilis and tuberculosis are the greatest scourges of humanity—the former sapping the vigour of the flower of the land, stunting our youths, degrading our women, contaminating our children, and ruining the army on which our empire depends. But it is specially to the notification and prevention of tuberculosis that I wish to call attention—tuberculosis, which causes from 15 to 30 per cent., and in some exceptional cases from 50 to 60 per cent., of all deaths between the ages of fifteen and fifty years. I would ask if it be not time for us, as a profession, to unite at least for the good of others, if not for ourselves, and proclaim to the public with no uncertain voice that they must and shall take heed to the voice of sanitary science and take measures to prevent under rigorous penalties the reckless dissemination of tuberculosis? This they will the more readily do when they are taught to understand that it is an ever-present danger to which each and all are exposed, and this truth should be unceasingly impressed on both the classes and the masses,—who should be educated by our profession by mouth and broadcast pamphlets. Ransome, in the Milroy Lectures, estimates that 70,000 persons perish annually from tuberculous disease in this country alone and that in the form of phthisis it is the cause of death between the ages of fifteen and forty-five years (the most useful stage of human existence) of more than one-third, and between the ages of fifteen and thirty-five years of nearly one-half of all who die annually. The monetary loss to the country by this mainly preventable sickness and death must be something enormous. Dr. J. M. Lindsay, in an excellent paper on the Problem of the Consumptive Poor, estimates from reliable data that the persons suffering from phthisis at the present time in the British Isles cannot be less than a quarter of a million. He also laments the lack of hospital accommodation for them and quotes Dr. Hermann Weber that "well-arranged special hospitals for the treatment of consumption can accommodate only 1 sufferer in 1000." Professor Leyden is quoted as calculating the deaths from phthisis in Germany as 170,000 per annum and the number of the living who are suffering from phthisis he estimates at 1,300,000. The fearful mortality in prisons, asylums, and convents from tuberculosis is shown in Dr. Hermann Biggs's reports by copious extracts from well-known authorities on the subject too numerous to be mentioned here; suffice it to say that the death-rate in these institutions from phthisis averages from 38 to 62 per cent. of all deaths.

The first and main point which I want to emphasise is that the public must be educated as to the nature, cause, and curability of phthisis, and taught that by far the most usual method of its dissemination is by dried sputum—tuberculous meat and milk taking a secondary place. It is only by making the public fully alive to the source and danger of the present state of things that they, and through them the Government, can be moved to act, and this can only be done by us as a united profession. Every medical society, association, or organisation should be a nucleus for disseminating knowledge of the more recent views as to the prevention of tuberculosis and its usual origin, and these views should be respectfully but firmly urged on the various corporate bodies, local government boards, county councils, &c., by memorials praying that the public should be instructed by means of pamphlets and *viva-voce* teaching. Attention would then be aroused and the medical profession would be given a free hand in the matter, and measures in accordance with medical sanitary science would be promptly adopted. This is no visionary scheme; it has already been acted on and efficiently carried out in America, notably in New York, where notification of phthisis exists, and the public board of health not only affords every facility to medical men for the gratuitous examination of sputum but is able to insist on thorough disinfection of premises in which a victim of phthisis has either lived or died. It also insists on these premises not being let or tenanted until such disinfection has been carried out to the entire satisfaction of the inspector. It also issues for free distribution leaflets and pamphlets in four languages giving instructions to patients and their relatives and friends as to the contagiousness of tuberculosis, its dissemination from dried sputum, together with directions for its disinfection and destruction, and moreover it rigidly enforces an effectual inspection of all meat and milk-supplies for the security of the public against tuberculous meat and milk. If all this can be and is done elsewhere, why can it not be effected in England? Leprosy, plague, and cholera have been almost stamped out in the British Isles, and although it is now almost universally admitted that tuberculosis is a communicable and infectious disease and by far the most fatal to which our race is exposed yet we take no precautions against its spread. Statistics prove it to be the most easily controlled of all the infectious disorders, while it is more fatal in its ravages than all the principal diseases put together. In London alone, with its 4,500,000 inhabitants, tuberculous disease causes upwards of 10,000 deaths annually, the death-rate for London from tuberculosis being one-seventh of the entire death-rate, and the majority of those 10,000 lives might and should have been saved. According to our present knowledge tuberculosis is chiefly disseminated by the dried, pulverised sputum of those suffering from the complaint being inhaled into the lungs of those already susceptible, and this is the point we should constantly impress on the public. We have, of course, a Board of Health, but we need a body such as I have already described in New York, with power not only to lay down sanitary laws but also to enforce them. These are, briefly, compulsory notification of all cases of tuberculosis, stating age and sex, duration of disease, and place of residence; gratuitous examination of sputum; isolation in special hospitals and disinfection of premises; prompt disinfection and destruction of sputum; and rigid inspection of all meat and milk-supplies. The Government of the United States is democratic, but the sanitary measures adopted are sometimes autocratic and the functions performed by sanitary authorities paternal in character. I freely admit that in this country public opinion is not yet ripe for radical measures, but surely a beginning might be made if only our profession put all their united energies into so good a cause. Why should not we adopt the same precautions with regard to tuberculosis that we do not hesitate to enforce in the case of small-pox, scarlet fever, and diphtheria? We should thus, perhaps, become in time, as a profession, not simply medical advisers but a species of "beneficent autocrats" with the power of enforcing our salutary policy in spite of the prejudice, timidity, and sentimental conventionality which step in and ofttimes prevent us from carrying our scientific convictions to a philosophical conclusion. Surely he who robs us of our health is not less guilty than he who robs us of our wealth and both should be equally amenable to the law.

Folkestone.

A METHOD OF ADMINISTERING NITROUS OXIDE GAS FOR THE PRODUCTION OF ANÆSTHESIA, AVOIDING THE USE OF A CLOSED MASK OR OF VALVES.

BY GEORGE FLUX, M.D. BRUX.,

ANÆSTHETIST TO THE GREAT NORTHERN CENTRAL HOSPITAL AND TO THE BRITISH LYING-IN HOSPITAL; ASSISTANT ANÆSTHETIST TO THE DENTAL HOSPITAL OF LONDON; LATE ANÆSTHETIST TO THE NATIONAL DENTAL HOSPITAL.

IT is usually regarded as an accepted fact that the special aim in giving nitrous oxide gas should at first be to exclude air and that in order to achieve this the patient's face must be enclosed in an accurately fitting mask so constructed that respiration can only be carried on through valves and under pressures differing from that of the normal atmosphere. Experience has shown that to get good results with nitrous

oxide gas a sufficient supply of oxygen must be provided by nature or art. The old "laughing gas" was impure and when mixed with oxygen produced great excitement; the modern gas, being pure, when mixed with oxygen rarely produces undue excitement, so that the objection to mixing it with air no longer holds good.

I have found that pure nitrous oxide gas administered in the following manner produces most excellent results. The patient being seated in a chair with the head slightly thrown back, a napkin folded to a width corresponding to the height of his face is passed round his head and lightly secured in such a manner that, while the lower border of the napkin is in contact with the chin and lower part of the face, the upper border at a level with the patient's eyes bulges forward several inches so that a cup-like cavity, open at the top and closed at the bottom, is formed. The patient is now ready to receive the gas. The gas is supplied by merely holding the end of the supply pipe over the cup-like cavity, the amount being regulated by a stopcock; the gas by its own weight falls into the cavity, and is thus easily inspired at the normal atmospheric pressure and thoroughly mixed with as much air as the patient requires. At each expiration the patient blows the face-piece nearly empty, and on inspiration breathes both fresh air and fresh gas; it is only necessary to turn on fresh gas when inspiration occurs. I find that from eight to ten gallons of gas are used for a single administration, but with a less porous and a better-fitting face-piece than a folded napkin the consumption should be considerably less.

So far my operations in this direction have been conducted without any specially constructed apparatus, but now that I am convinced of the practicability of the method I am having one made; it consists of a cup-shaped face-piece completely open at the top with a suitable stopcock for regulating the supply of gas.

The number of cases in which I have used this method has so far been limited, but in all of them the most striking feature has been the extreme tranquillity of the patient, who passes easily by almost imperceptible stages from consciousness to anæsthesia and back again to consciousness and has all the appearance of being merely asleep. The face keeps its colour, the breathing continues gentle, and sleep becomes deeper and deeper till the usual signs of anæsthesia appear, lasting from forty-five to sixty seconds, when the patient quietly wakes up. In none of these early cases has there been any jactitation, stertor, or noise, nor any hurrying of respiration, nor any complaint of the slightest feeling of inconvenience to respiration. I have tried this method upon myself and, apart from a sense of drowsiness, I was unaware of any unusual sensation. In addition to the action of the face-piece in conveying the gas to the patient, its being wide open at the top has the great advantage that it enables the whole of the patient's face to be under direct observation and it also adds to his comfort. It allows his respiring under ordinary conditions, thus relieving all sense of oppression; he is free from the transmitted hiss from the gas bottles and from the disturbing bruit of valves, to say nothing of his escaping from the odour which seems inseparable from all ordinary forms of gas apparatus and from the discomfort and risks of breathing into and out of an apparatus which many have used before him.

Old Burlington-street, W.

THE TREATMENT OF RINGWORM OF THE SCALP.

BY H. LYLE, M.R.C.S. ENG.,

SENIOR ASSISTANT SURGEON TO THE HOSPITAL FOR CANCER AND SKIN DISEASES, LIVERPOOL.

THE treatment of ringworm of the scalp, especially if the case has become chronic, is most tedious and tiresome. Much has been written about the subject, but the treatment still remains as unsatisfactory as ever. Dependent as the disease is on the implantation and subsequent growth of the spore of the trichophyton tonsurans it commences as a small spot and generally escapes notice until it has become a patch of more or less considerable size. As this spore has probably been simultaneously implanted at different points the patches are usually multiple, being more or less circular in form and presenting a roughened appearance. The hairs on the infected areas are short and stubbly and are easily removeable. Of course, many cases of ringworm of the scalp are fairly easily cured, but others drag on month after month in spite of every kind of treatment. Among the remedies which have been recommended for this intractable disease are daily epilation and the application of various drugs, some in the form of ointments and others as oils. Formalin has been very highly spoken of, but I have found its application so painful that I no longer employ it. Chrysarobin has been much used alone and in combination, as well as *huile-de-cade* and iodide of sulphur. Oleate of mercury dissolved in olive oil has likewise been extensively tried. Of course, in places where there is a special hospital the medical adviser, disgusted and wearied with the seeming futility of his treatment, can either recommend his patient to a specialist or, if the patient is too poor for that, he can send him to the hospital. But in the country such a course is mostly out of the question and the medical man has to do the best he can.

Hoping that it may be useful to the country practitioner, who has no one to whom to send his chronic cases of ringworm, I venture to lay before the readers of THE LANCET a plan of treatment which I have found most satisfactory. Tired of seeing children come week after week and month after month with no improvement in their condition I determined to try what painting with a solution of silver nitrate would do. Among others on whom I used it I chose two of the most chronic cases which I could find; in one case the patient had been attending hospital twice a week for many months and in the other not quite so long. Neither of these patients had improved much in spite of their long attendance. The usual changes had been rung on the drugs generally employed—namely, ointments, oils, &c. The method I adopted was this. I had the heads entirely shaved and kept so. I scraped each patch with a Volckmann's spoon and then, by means of a piece of cotton wool rolled round the end of a glass rod and tied there, I applied a solution of silver nitrate of the strength of a drachm in an ounce of proof spirit and well rubbed it in. This of course turned all the places of application black. This was done twice a week and after removing the black layer each time (which came off fairly easily) I scraped off as much of the underlying parasitic growth as I could with the spoon before repainting with the solution. The smarting after its use was not much and only lasted a short time. An oil of oleate of mercury, 5 per cent. in strength, was rubbed into the heads night and morning as well. In the two cases which I have mentioned I had to paint almost the entire scalp so large was the extent of the growth. The heads were washed before the application and, as stated above, were kept shaved. Of these two cases after about fourteen weeks of this treatment one is quite well and the other is nearly so. I have tried this method on heads *de novo*, but I have found it very difficult to get the mothers to persevere with the attendance. In all the cases, however, in which I used it the improvement was remarkable. One boy who had numerous patches when he first came under treatment has now (after about fifteen weeks) no spots at all. As the diseased areas became smaller and on the wane I increased the strength of the solution from one drachm of the salt to two drachms to the ounce of spirit, but I always scraped the patches before applying it. I am of opinion that the remedy in addition to the destructive effect of silver nitrate on organic matter acts by depriving the growth of air. I should like to say that I often see cases of alopecia areata which have been sent as tinea. I need hardly remark that the remedy is not likely to be of much use to them.

Liverpool.

EXHIBITION OF OPTICAL AND OTHER INSTRUMENTS AT THE LONDON MANSION HOUSE.—On Monday last, Oct. 3rd, the Lord Mayor opened an exhibition of optical, mathematical, and scientific instruments under the auspices of the Spectacle Makers' Company. Among the objects of interest to be seen are astrolabes of the fourteenth to seventeenth centuries, sun dials from England, France, Germany, Italy, and the maximum and minimum thermometer used by Captain Ross in his various voyages round the world. Among the exhibits of interest to medical men are those of Messrs. W. Harry Cox, Ltd. (electrical and scientific apparatus), Messrs. Raphael and Co., Messrs. F. W. Paul, Messrs. Carpenter and Westley, Messrs. R. and J. Beck, Ltd., and Messrs. George Culver.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ROYAL FREE HOSPITAL.

A CASE OF ACUTE MEMBRANOUS LARYNGITIS IN A CHILD REQUIRING TRACHEOTOMY AND INTUBATION; RECOVERY.

(Under the care of Dr. SAINSBURY.)

THE following case is well worthy of being recorded, especially in connexion with the very similar case reported in THE LANCET of August 13th. Although the failure to find the bacillus of diphtheria is no certain proof of the absence of that disease, yet if the examinations have been careful and numerous we are fully justified in saying that the case is in all probability not diphtheritic. Theoretically it is by no means impossible for an inflammation caused by streptococci to be accompanied by a membranous exudation; all that is required is that the inflammation should be of sufficient intensity to give rise not merely to a "serous" exudation but to an exudation which can coagulate. In the analogous case of inflammation of the serous membranes the degree of coagulability of an exudate varies greatly. There is much to be said in favour of the view of the existence of a membranous laryngitis not due to the Löffler bacillus, but its existence can only be proved by the putting on record of all cases which have been carefully observed and bacteriologically examined. For the notes of the case we are indebted to Mr. Allan C. Parsons, house physician.

A child, aged one year and four months, was admitted to the Royal Free Hospital on April 10th, 1898, at 2 A.M. with difficult and noisy breathing of three days' duration. On examination the patient was found to be suffering from marked laryngeal obstruction, as shown by the stridor on inspiration and sucking in of the lower ribs. There was slight cyanosis and the alæ nasi were working vigorously. The child was breathing 22 to the minute: examination of the lungs revealed nothing abnormal. The pulse-rate was 120 and the heart's action was well maintained. The temperature was 96° F. The fauces were reddened and slightly swollen, but no membrane could be seen. Though the child was restless the general condition was fair and there was no albumin in the urine. The child was isolated with steam-kettle and tent, and at 2.30 P.M. on April 10th 10 c.c. (4000 units) of antitoxin were injected. The same dose was repeated twelve hours later. The child took food very badly and nasal feeding was resorted to. On the day after admission a culture was made from the mucus of the pharynx with a negative result as regards diphtheritic bacilli, streptococci alone being found. By the 13th the general condition of the child had improved considerably, though the breathing was noisy and difficult at times. Nasal feeding was no longer necessary. On the 15th, five days after admission, the child became very restless and suffered from attacks of spasmodic dyspnœa. The cough was dry and croupy in character, and on listening to the chest rhonchi were heard over both lungs. The pulse-rate had increased and the temperature rose to 101°. A second culture was made, but no specific organisms were found. The breathing became more and more difficult and the child was standing up in the cot fighting for breath. An operation was deemed advisable and tracheotomy was accordingly performed on the 16th at midnight. The breathing at once became easier and the child slept for twelve hours after. Three days later the metal tube was replaced by a soft rubber one. About this time some "membrane" was coughed up through the tube, but though a careful bacteriological examination was made no diphtheritic bacilli were found. The child continued quite well and comfortable so long as the tube remained in, but attempts to remove it at once brought on dyspnœa and cyanosis. As this difficulty got worse it was decided to try intubation, therefore on May 2nd the smallest sized O'Dwyer's tube was passed without an anæsthetic. Twelve hours later the tube was removed and the child was seen to be breathing quite naturally through the larynx. From now onwards the child made a rapid recovery and during convalescence iron and strychnine were given. The patient was seen three months after admission, in good health and without any sign of paralysis.

Remarks by Dr. SAINSBURY.—This case presents one or two points of special interest. In the first place it would seem to be an instance of a non-diphtheritic membranous laryngitis arising independently of any direct damage to the part, as by scalding or other form of mechanico-chemical irritation. In favour of this conclusion there are (1) the negative results of cultures taken from the fauces and the direct negative examination of the membrane coughed up; (2) the absence of any albumin in the urine; (3) the absence of any paralytic sequelæ; and (4) the fact that no history pointing to contagion could be obtained. Non-diphtheritic membranous laryngitis, contended for by many, amongst others by Fagge, denied by many others, and in any case regarded as a rare event, would seem to have been present here. In the next place the case is of interest on account of the speedy relief, obtained by intubation, of that troublesome condition which makes it sometimes so difficult to remove the tube after tracheotomy. It is not a question here of discussing the relative merits of intubation and tracheotomy and the case is an instance simply of the value of intubation as a supplement to tracheotomy. Lastly, assuming the case to have been non-diphtheritic, we may note the complete harmlessness of 8000 units of diphtheria antitoxin.

ROYAL CORNWALL INFIRMARY.

TWO CASES OF DISLOCATION OF THE LENS INTO THE ANTERIOR CHAMBER OF THE EYE; REMOVAL.

(Under the care of the late Dr. GEORGE F. HELM.)

THE displacement of the crystalline lens into the anterior chamber of the eye can only occur with a dilated pupil and is certainly much less common than the dislocation into the vitreous. Though cases do occur in which the displacement is not followed by any other ocular disturbance, and the lens may even remain transparent, yet usually the irritation set up requires the removal of the lens, and especially is this advisable if the displaced structure has become opaque. The risk of escape of vitreous in removing the lens is less if the dislocation has taken place into the anterior chamber than if the lens has passed backwards. The second case is of interest as having followed the crude "operations" of the "Indian oculists" who practised in England a few years ago. The operation they performed was evidently the old "couching for cataract."

CASE 1.—A man went to the Royal Cornwall Infirmary stating that three weeks previously he had received a blow on the left malar bone from a piece of stone which he was breaking with a hammer. The eyeball was not struck by the stone. He had experienced terrific pain in the eye. The lens of the left eye was displaced forwards into the anterior chamber. The centre of the lens was quite opaque and was placed obliquely in the anterior chamber, the upper margin being more backward than the lower. The pupil was widely dilated and there was great ciliary injection. The tension was quite + 1. Perception of light was fairly good. The anterior chamber was free from inflammatory products. The patient's consent for an attempt to be made to extract the lens with enucleation to follow if unsuccessful was readily given. A Graefe's knife easily passed across the anterior chamber, the obliquity of the lens facilitating this. A slight escape of vitreous followed the incision, but with a fine scoop Dr. Helm secured the lens and withdrew it. The eye recovered perfectly well and the patient left the infirmary with vision equalling $\frac{6}{12}$ with a convex lens.

CASE 2.—Dr. Helm was consulted in 1891 by a man about his left eye. There was no vision with this eye, which, moreover, was very painful. It was evident that his lens was in the anterior chamber. The history of the eye was as follows. Some years ago the patient had an injury to this eye which caused traumatic cataract. For the cure of this he consulted the "Indian oculists," then in Cornwall, who operated upon it. The pain being so dreadful he begged to be relieved. By means of a Graefe's knife and a scoop

Dr. Helm extracted the lens without the loss of any vitreous. The eye progressed perfectly well, but the patient refused any spectacles, being contented with the vision of the other eye.

Remarks by the late Dr. HELM.—The treatment of cases of dislocation forwards of the lens appears to admit of no doubt: (1) the dislocated lens must be removed by extraction—it can be of no use trying to replace it, for the eye does not tolerate even a dislocated lens; but (2) if as the result of the incision of the cornea there follows a considerable loss of vitreous it then becomes a question as to whether it is not best for the ultimate welfare of the patient to enucleate the eyeball. This I was prepared to do in either case supposing that my efforts to extract were not successful. In both the above cases the fact that the lens had become opaque was a decisive reason for extraction. I had an opportunity of examining the instruments which the "Indian oculists" use in the couching of cataracts. They are two in number. Their operation consists, first, in making an incision in the sclerotic behind the ciliary attachment of the iris. This they do with a huge old-fashioned lancet which in their case was rusty and very dirty. Into this incision the second instrument is inserted—viz., a large copper probe with a conical end of the size of a No. 4 Couper's lacrymal probe. This is passed through the pupil at its upper portion and the lens is made to "lie down"—their own words. Sometimes they fail and, as in the instance of the patient in Case 2, the lens slips through the pupil, with the result which I have described.

Reviews and Notices of Books.

Dictionary of National Biography. Edited by SIDNEY LEE. Vol. LIII. Smith—Stanger. London: Smith, Elder, and Co. 1898. Pp. vi. and 486.

THE biographies in this volume include one of Edmund Spenser, the celebrated author of "The Faerie Queene." Spenser was born in London about 1552 and lived in Ireland as a Government official from 1580 to 1598. Of the two poems on which his fame mainly depends, "The Shepheards Calender" was the first to appear in print, the date of publication being 1579. "The Faerie Queene" was issued in two successive portions, the first in 1590 and the second in 1596; the biographers (Professor J. W. Hales and Mr. Sidney Lee) claim for it "a place among English narrative poems not far below the greatest of them—Milton's 'Paradise Lost.'" Spenser died in Westminster in 1599. Adam Smith, well known as the author of the "Theory of Moral Sentiments" and the "Wealth of Nations," was born at Kirkcaldy in Fifeshire in 1723. In 1751 he was appointed Professor of Logic in Glasgow University, and in the following year he was transferred to the chair of Moral Philosophy. He was a patron of James Watt, the inventor of the steam-engine, who was enabled by the University to set up as a mathematical instrument maker in Glasgow. The "Theory of Moral Sentiments" was published in 1759 and the "Wealth of Nations" in 1776. Adam Smith died in 1790.

The biographies of medical men are thirty-two in number. John Flint South was born in London in 1797, studied medicine at St. Thomas's Hospital, having been apprenticed to Henry Cline the younger for the usual sum of £500, and was admitted a member of the Royal College of Surgeons of England in 1819. He held various appointments at St. Thomas's Hospital and was eventually, in 1841, made full surgeon, a post which he resigned in 1863. He was also in 1841 elected a member of the Council of the Royal College of Surgeons of England and in 1843 was nominated one of the first Fellows of the College. He acted as Professor of Human Anatomy and Surgery in the College for 1845 and he was Hunterian orator in 1844. "His oration made no mention of the man he was called upon to eulogise; he gave a retrospect of the history of medicine, beginning at so early a period that the time expired before he had arrived at the eighteenth century." Mr. South was President of the Royal College of Surgeons of England in 1851 and again in 1860; he resigned his official connexion with the College in 1873. He published several original works and translations of treatises by Otto and von Chelius. The last twenty years of his life were spent in gathering materials for a history of English surgery. The project was on too large a scale to enable him to make much progress, but his work was edited by Mr. D'Arcy Power in 1886 under the title of "Memorials of the Craft of Surgery." He died at Blackheath Park in 1882. Samuel Solly was born in London in 1805. In 1822 he was articled to Benjamin Travers, surgeon to St. Thomas's Hospital, and was one of the last of the surgeons to a London hospital who succeeded to his post by the payment of a large apprenticeship fee. He was admitted a Member of the Royal College of Surgeons of England in 1828. From 1833 to 1839 he was lecturer on anatomy and physiology in the medical school of St. Thomas's Hospital; he was appointed assistant surgeon to the hospital in 1841; twelve years later he became full surgeon and was appointed lecturer on surgery. Elected a Fellow of the Royal College of Surgeons of England in 1843, he became a member of the Council in 1856 and was twice a vice-president. He was admitted a Fellow of the Royal Society in 1836 and became President of the Royal Medical and Chirurgical Society in 1867–68. He died in 1871. James Spence was born in Edinburgh in 1812. He studied medicine in Edinburgh University and in the extra-mural school and in 1832 he received the diploma of the Royal College of Surgeons of Edinburgh, having previously spent some time in Paris studying anatomy and surgery. As soon as he was qualified he made two voyages to Calcutta and on his return to Edinburgh he passed about 22 years teaching anatomy and surgery in the extra-mural school until in 1864 he became Professor of Surgery in the University. He was appointed a Fellow of the Royal College of Surgeons of Edinburgh in 1849 and was President in 1867 and 1868. He was made surgeon-in-ordinary to the Queen in Scotland in 1865 and became a member of the General Medical Council in 1881 as representative of the Royal College of Surgeons of Edinburgh. He died in 1882. The writer of the biography (Mr. D'Arcy Power) says of him: "Spence must be reckoned among the great operating surgeons who have rendered Edinburgh famous throughout the world. Like Liston, Fergusson, and Syme, he had so intimate a knowledge of anatomy that every step in a difficult operation was foreseen. ..... He was essentially a conservative surgeon, and, like his great contemporary, Sir William Scovell Savory, he maintained that in skilled hands the simpler methods of the older school were preferable to, and gave as good results as, the more complicated system adopted by the disciples of the antiseptic school of Lister." John Spurgin, born in Essex in 1797, studied at Cambridge University and in Edinburgh, graduating at Cambridge as M.D. in 1825. He became a Fellow of the Royal College of Physicians of London in 1826, Censor in 1829, conciliarius in 1851–53 and 1862–64. He delivered the Harveian Oration in 1851 and the College lectures on Materia Medica in 1852. He enjoyed an extensive practice, was physician to the Foundling Hospital and St. Mark's Hospital, and died in 1866. Andrew Smith, born in Roxburghshire in 1797, studied medicine at Edinburgh University and graduated as M.D. in 1819. From 1821 to 1837 he was an army medical officer in Cape Colony, during which time he superintended exploring expeditions in Central Africa, collected the materials for his "Illustrations of the Zoology of South Africa," and wrote papers on the Bushmen. It was due to his representation and counsel that Natal became a colony of the British Crown. Returning to England in 1837, he was made Inspector-General and

Superintendent of the Army Medical Department in 1851 and was nominated Director-General of the Army and Ordnance Medical Departments in 1853. The evidence laid before the Sebastopol and other committees did much to vindicate his reputation as an administrator during the Crimean campaign. He was created K.C.B. in 1858 and died in 1872. Aquilla Smith, born in county Tipperary in 1806, studied medicine at Trinity College, Dublin, and received the degree of M.D. *honoris causâ* in 1839. He was Professor of Materia Medica and Pharmacy in the School of Physic from 1864 to 1881, and from 1851 to 1890 he represented the Royal College of Physicians of Ireland in the General Medical Council. He was a copious writer on antiquarian subjects, mainly numismatics. He died in 1890. Edward Smith, born in Derbyshire about 1818, was educated at Queen's College, Birmingham, and graduated at London University as M.D. in 1843. In 1853 he was appointed lecturer on anatomy at Charing-cross Hospital and in 1861 assistant physician to the Brompton Hospital for Consumption. His first researches were on questions connected with physiological chemistry, several memoirs on which were presented to the Royal Society, and he was admitted F.R.S. in 1860. Dietetics formed the subject of most of his subsequent literary work, and after being consulted by the Government on Poor-law and prison dietaries he was appointed medical officer of the Poor-law board. He died in 1874. John Gordon Smith, born in 1792, was educated at Edinburgh, graduated at the University there in 1810, and was present at the battle of Waterloo as surgeon to the 12th Lancers. He lectured on medical jurisprudence at the Royal Institution of Great Britain in 1825 and 1826 and in 1829 was elected the first Professor of Medical Jurisprudence at the London University (now University College) in Gower-street. None of the licensing bodies in London required any evidence of instruction in forensic medicine and there was consequently no class. Smith lectured for two years and then resigned his office. For a time he edited the *London Medical Repository*. He died in a debtors' prison, after fifteen months' confinement, in September, 1833. Thomas Southwood Smith, born in Somerset in 1788, studied medicine in Edinburgh and graduated as M.D. at the University there in 1816. From 1812 to 1820 he was a Unitarian preacher, partly in Edinburgh and partly in Yeovil, Somerset. In 1820 he removed to London and entered on an active career as a writer for the Useful Knowledge Society and as a pioneer of sanitary reform. In 1832 he was placed on the Central Board for Inquiring into the Condition of Factory Children, an inquiry the precursor of the existing Factory Acts, and in 1848 was appointed medical member of the "General Board of Health." He died at Florence in 1861. William Tylor Smith, born in 1815 near Bristol, was educated at the Bristol School of Medicine and graduated as M.D. at London University in 1848. When St. Mary's Hospital was founded he was appointed obstetric physician and lecturer on obstetrics and taught there for the allotted term of twenty years. "He was long engaged upon the editorial staff of THE LANCET, at first only as an occasional contributor, but soon as one of its sub-editors. Among his contributions were valuable papers 'On Quacks and Quackery' and a series of biographical sketches of the leading physicians and surgeons of the metropolis." His Manual of Obstetrics published in 1858 immediately became, and long remained, the favourite textbook in this country. He raised the position of obstetric medicine, not only by his teaching, oral and written, but by the foundation of the Obstetrical Society of London, of which he was elected President in 1860. He died in 1873. John Snow was born at York in 1813 and studied medicine in London. In 1838 he was admitted a Member of the Royal College of Surgeons of England and in 1844 he graduated as M.D. at London University. To him is due the theory that cholera is communicated by means of a contaminated water-supply, and his essay upon the Mode of Communication of Cholera, which was first published in 1849, was awarded by the Institute of France a prize of £1200. In 1846 he demonstrated the use of ether as an anæsthetic in St. George's Hospital and the ether practice in London came almost entirely into his hands. He also administered chloroform to the Queen at the birth of Prince Leopold in 1853 and again at the birth of Princess Beatrice in 1857. He died in 1858.

Two names of medical men who have won a purely literary celebrity deserve to be mentioned. Albert Richard Smith, son of a surgeon, was born in Surrey in 1816, studied at the Middlesex Hospital, and became qualified in 1838 as M.R.C.S. Eng. and L.S.A. He commenced medical practice but was soon diverted from it to the writing of numerous novels, sketches, dramas, extravaganzas, entertainments at the Egyptian Hall, contributions to *Punch*, &c. He died in 1860. Tobias George Smollett was born in 1721, near the town of Bonhill, Dumbartonshire, studied medicine at Glasgow University, and after serving four years as a surgeon in the Royal Navy settled in practice in London. His first novel, "Roderick Random," appeared in 1748; his second, "Peregrine Pickle," in 1751; and his third, "Ferdinand Count Fathom," in 1753. In 1770 he took a house near Leghorn, where "Humphrey Clinker" was written the same year, and where he died in 1771.

LIBRARY TABLE.

A Treatise on the Science and Practice of Midwifery. By W. S. PLAYFAIR, M.D. Edin., LL.D. St. And., F.R.C.P. Lond. Ninth edition, with over 200 Illustrations and 8 Plates. Two vols., demy 8vo. London: Smith, Elder and Co. 1898. Price 28*s*.—It is pleasing to see from the appearance of a ninth edition of Playfair's Midwifery that this favourite and well-known text-book still holds its own amongst the numerous competitors with which at the present time it has to contend. The reason is, however, not far to seek when we see how thoroughly this new edition has been brought up to date. The author has been fortunate in accomplishing this without unduly increasing the number of pages, only some 36 having been added to the whole, so that the work still retains its handy form and size. Two new plates and some 17 new illustrations have been introduced. The plates are one of a section of the frozen body towards the termination of the second stage of labour, after Barbour, and one illustrating streptococci, after Bumm and Crookshank. Dr. Playfair has secured the valuable assistance of Dr. Eden in revising the section upon Conception and Generation, and the outcome is a chapter of great interest, including the results of all the most recent work upon the subject. Amongst other changes we note that the treatment of cases of ectopic gestation has been revised in accordance with the latest views. The author is in favour of treating cases where the tube has ruptured extra-peritoneally and where operative interference is called for by Kelly's method of vaginal incision followed by plugging of the cavity with iodoform gauze, and subsequent irrigation with antiseptic lotions. In the chapter upon Ovarian Tumours causing Obstruction during Labour Dr. Playfair quotes Dr. McKerron's recent paper upon the subject, and while in the main agreeing with his conclusions thinks that in cases of small tumours vaginal extirpation might often be possible. The cases recently reported of vaginal Cæsarean section followed by total extirpation of the carcinomatous uterus at full term show that tumours of considerable size can safely be extracted in this way owing to the great relaxation of the passages which occurs in connexion with pregnancy. It is possible, therefore, that vaginal ovariotomy may turn out to be a successful mode of treatment where small ovarian cysts impacted in the pelvis are causing obstruction to labour.

In Dr. McKerron's paper 3 cases treated in this way are recorded, all of which recovered. Many other portions of the text besides those which we have noticed bear evidence as to the care with which the whole has been revised, and the book well maintains its reputation of being one of the most readable and reliable works upon the subject of which it treats.

Elements of Sanitary Law. By ALICE RAVENHILL, Lecturer to the National Health Society. With an Introduction by Sir RICHARD T. THORNE. London: The Sanitary Publishing Co. Price 6*d.*—This is an unpretending little pamphlet of 44 pages containing various provisions from the Public Health Acts set out in plain and simple language. All the references are given so that authority for the statements can be easily looked up if necessary. Our sanitary laws are very good as a whole and the only fault we have to find with them is that in too many cases they are permissive, that is to say, the sanitary authorities are told that they *may* do this or that instead of *must* do it. Concerning one form of negligence which has been much in evidence of late, the magistrates have shown a weakness in convicting or, if they have convicted, have inflicted ridiculously light penalties, which is certainly not the way to get the nuisance abated. Miss Ravenhill has done a very good work in thus laying before the ordinary citizen the rules and regulations which make, if properly carried out, for his health.

Analytical Records FROM THE LANCET LABORATORY.

1) GRANULATED GLYCERO-PHOSPHATES (ROBIN); (2) KOLA BINSCE; AND (3) PEPTONATE OF IRON (ROBIN).

(AGENCY: C. JOZEAU, 49, HAYMARKET.)

As is well known, the glycero-phosphates in the form of calcium and sodium salts have been administered with excellent results in improving the general nutrition of the nervous system. Lecithin yields on suitable chemical treatment and by the process of digestion also the calcium salt of glycero-phosphoric acid and this has doubtless suggested its value in neurasthenia and as a specific restorative in general debility. The preparation described above occurs in granular form and contains both sodium and calcium salts. It is a beautifully white, clean, crystalline powder, which is quite stable in character. It possesses a slightly sweetish taste. Chemically pure glycero-phosphate of lime may be had also in the form of tablets which are slightly effervescent. Each tablet contains about 5 gr. of the salt. "Kola Binsce" is essentially a granulated preparation of the glycero-phosphates which, however, in addition, contains an important amount of the active principles of the kola nut. We found that by extracting the compound with chloroform a distinct quantity of caffeine was obtained. This is to some extent a proof of the statement that kola nut is part of the combination. The grains are delicately coffee-coloured. According to the formula "kola binsce" should be a valuable tonic combination. Peptonate of iron is well known and the preparation submitted to us gave evidence of care in its elaboration so as to exclude the objectionable properties common to the ordinary iron salts. Pure peptonate of iron is not astringent and does not disturb the digestive functions and while it is known as the most easily assimilated form of iron it does not produce constipation.

KLOESTERLE MINERAL WATER.

(FIRBER BROTHERS, 14, MINCING-LANE, E.C.)

Kloesterle water is drawn from a spring near Carlsbad, Bohemia. It contains a slight excess of free carbonic acid gas and a notable proportion of alkaline salts, with which is lithia in small but distinct quantity. The proportion of common salt is small and does not exceed 0·064 gramme per litre. The alkalinity of the water is equal to 1·26 grammes of carbonate of soda per litre. Carbonate of soda indeed is the chief constituent, the lime and magnesium salts occurring in trifling quantities. It is on this account probably that the water is so peculiarly soft to the palate. The saline residue obtained on evaporating a few ounces of the water gave a marked lithium line when examined spectroscopically. The water presents an interesting composition and is quite free from organic matter. It ranks with those alkaline carbonated waters of which a course is known to be useful in certain gastric disorders, while it also exercises a beneficial action on the urinary functions.

VICTORIA VIOLETS SOAP.

(EVANS GADD AND CO., 97, 98, 99, AND 100, FORE-STREET, EXETER.)

The materials in this soap are well chosen, pure and combined in proper proportion. We could trace no injurious ingredients or foreign substances, minute tests for the presence of free alkali being attended with negative results. The soap is stained apple green and possesses an agreeable odour of violets. It lathers somewhat freely and is pleasantly emollient.

FALIÈRES PHOSPHATINE.

(AGENCY: 64, HOLBORN-VIADUCT, E.C.)

Though so far little known in this country this preparation appears to have been employed as a valuable infants' and invalids' food on the continent. It is essentially a farinaceous food prepared by a special process which adds to its digestibility and it is enriched by the addition of very finely comminuted phosphate of lime and is finally sterilised. According to our analysis its composition is as follows: moisture, 9·66 per cent.; mineral salts, 1·16 per cent.; nitrogenous constituents, 9·0 per cent.; dextrine sugars and soluble starch, 35·03 per cent.; insoluble starch, cocoa, &c., 41·53 per cent.; and fat, 3·62 per cent. Over one-third part therefore is soluble in cold water, a result which is largely due to the action of careful baking. The flavour is somewhat sweet with a suggestion of cocoa and vanilla. The statement is quite correct that the phosphate of lime is present in a highly comminuted form and in such a condition as to offer no difficulty to assimilation. Added to milk it affords a food admirably adapted for the requirements of infants. Phosphatine, in fact, supplies just those important elements in nutrition upon which the proper growth and development of infants so much depend.

HOOBA DIGESTIVE TEA.

(THE HOOBA TEA CO., DUNSTER HOUSE, MINCING-LANE, E.C.)

Why this tea is described as "digestive" we are not certain. It yields normal results of analysis and apparently has undergone no special treatment. The mineral matter was quite an average amount, being 5·5 per cent. The alkalinity of the ash was equal to 1·53 per cent. calculated as potash K_2O. On complete exhaustion with hot water the astringent matters given up were normal in amount. An infusion prepared in the ordinary way was agreeable and delicate in character and free from the harsh properties of powerful Indian tea. It is a good specimen of tea and probably a specially selected leaf, but we do not consider that it possesses properties of a more "digestive" character than choice Ceylon or China growths.

(1) RIOJA BRILLANTE PALOMA (RED WINE); AND (2) LAS NAVAS (WHITE WINE).

(P. DE OTADUY AND CO., 20, HIGH HOLBORN, W.C.)

On analysis these specimens of Spanish wine gave the following results:—Rioja Brillante Paloma: extractives,

1·66 per cent.; mineral matter, 0·21 per cent.; tartaric acid, 0·72 per cent.; acetic acid, 0·15 per cent.; sugar, 0·10 per cent.; alcohol, by weight 9·36 per cent., by volume 11·61 per cent.; equal to proof spirit, 20·35 per cent. Las Navas: extractives, 1·65 per cent.; mineral matter, 0·22 per cent.; tartaric acid, 0·53 per cent.; acetic acid, 0·19 per cent.; sugar, 0·31 per cent.; alcohol, by weight 13·15 per cent., by volume 16·24 per cent.; equal to proof spirit, 28·46 per cent. There can be little doubt of the purity of these wines. They are quite sound in character, practically free from volatile acidity, and somewhat "full-bodied," but devoid of any excess of sugar. In this regard the red wine is practically free, while the white wine contains an insignificant amount. Neither is an old wine, but both promise an excellent development. The red wine, from the point of view of alcoholic strength, is lighter in character than the white wine. Spain is a country with a prolific production of grapes, and the above specimens are representative of some amongst the excellent and genuine wines which are now imported to this country and which are deservedly increasing in popular favour.

New Inventions.

A SURGICAL DRESSING-TABLE.

MESSRS. ARNOLD AND SONS have made an antiseptic surgical dressing-table at my suggestion for use in the consulting-room as well as in the operating theatre. It is constructed throughout of enamelled iron and runs easily on rubber-tyred wheels. The table can be raised or lowered to a convenient height and fixed in the required position by a screw. It is drained somewhat like a post-mortem table, and

all fluid passes down a central tube into a convenient receiver which can readily be removed. In private practice one has often to attend to surgical cases; and for dressing wounds and in minor operations I have found the table very convenient. In the operating-theatre it can be run alongside the operating-table and raised to any convenient height for the requirements of the surgeon or his assistants. I think it would be found very useful for military hospitals and on field service, as it can be easily carried about and is practically unbreakable. It can be made in various sizes.

HERBERT W. G. MACLEOD, M.D., M.S. Edin.,
Streatham, S.W. Late Her Majesty's B.M.S.

THE MEDICAL SCHOOLS.

SCHOLARSHIPS AND PRIZEMEN.

Charing-cross Hospital Medical School.—The following Entrance Scholarships have been awarded: Livingstone Scholarship (100 gs.), to Mr. G. E. Bellamy; Huxley Scholarship (55 gs.), to Mr. B. R. Bickford; and Universities Scholarships (each 60 gs.), to Mr. H. C. Gabb and Mr. B. G. Fiddian. Entrance Scholarships have also been awarded to Mr. R. H. Cooper (60 gs.), Mr. D. M. Davies (40 gs.), and Mr. T. Law (30 gs.), and Exhibitions of 30 gs. each to Mr. A. C. Ingram, Mr. G. O. Lambert, and Mr. B. R. Lloyd.

Guy's Hospital Medical School.—The following Entrance Scholarships and Certificates have been awarded: Scholarship for University students: Mr. H. S. French, Christ Church, Oxford, £50; Mr. E. J. Claxton, King's College, Cambridge, Certificate. Open Science Scholarships: Mr. E. H. B. Milsom, Guy's Hospital Medical School, £150; Mr. F. Rogerson, Guy's Hospital Medical School, and Mr. N. J. Spriggs, private study, equal, £30 each; Mr. H. D. Smart, Guy's Hospital Medical School, Certificate; and Mr. H. S. Brown, Guy's Hospital Medical School, Certificate. Open Arts Scholarships: Mr. R. F. MacDonald, Bancroft's School, £100; Mr. W. G. Taylor, Aberdeen University, £50; Mr. J. W. Walton, Folkestone Grammar School, £30; Mr. G. Hamilton, Aske's School, New Cross, Certificate; Mr. G. A. Horton, University Tutorial College, Certificate; and Mr. J. James, St. Bees School, Certificate.

London Hospital Medical College.—The following are the results of the examinations for the Entrance Scholarships: Price Scholarship, £120, Mr. F. W. Jones; Epsom Scholarship, £126, Mr. Colmer; Price University Scholarship, £60, Mr. Bousfield; Science Scholarship, £60, Mr. J. W. Fox; and Science Scholarship, £30, Mr. Rainforth.

Middlesex Hospital Medical School.—The First and Second Entrance Scholarships have been awarded to Mr. W. Cameron Macaulay and Mr. William Gordon Taylor, M.A., respectively. The Leopold Hudson prize and the Lyell gold medal have been awarded to Mr. A. J. Knowlton; the Hetley clinical prize to Mr. P. Gardiner and Mr. B. H. Slater; and the John Murray gold medal and scholarship to Mr. C. G. Pugh. Mr. H. R. Dutton, Mr. C. E. Lakin, Mr. C. H. Reisman, and Mr. C. G. Pugh have been elected Exhibitioners.

St. Mary's Hospital Medical School.—The following Entrance Scholarships have been awarded:—Natural Science: Mr. E. W. C. Bradfield, £144; Mr. N. T. Spriggs, £78 15*s.*; Mr. H. A. Haig, £78 15*s.*; Mr. J. H. Burgess, £52 10*s.*; and Mr. E. L. Ash, £52 10*s.* University Scholarships: Mr. H. E. Corbin, B.Sc., £57 15*s.*; Mr. W. H. Clayton Greene, £57 15*s.*; and Mr. W. V. Shaw, B.A., £57 15*s.*

St. Thomas's Hospital Medical School.—The First Entrance Scholarship and the William Tite Scholarship have been awarded to Mr. W. H. Harwood-Yarred the University Scholarship to Mr. F. C. Eve, and the Peacock Scholarship to Mr. C. N. Sears. Entrance Scholarships have also been awarded to Mr. Charles Michael Roberts, Scholarship, £150; Mr. Harry Mellor Woodcock, Scholarship, £60; Mr. Charles Hugh Latham, Exhibition, £20. The Mead Medal for Practical Medicine to Mr. E. F. Buzzard, the Cheselden Medal for Surgery to Mr. S. O. Bingham, and the Bristowe Medal for Pathology to Mr. A. D. Sikes. Medals have also been awarded to Mr. C. W. Pilcher, Mr. A. Bevan, and Mr. H. E. Hewitt.

University College, London.—The following Medical Entrance Scholarships have been awarded: Mr. H. A. Haig, 131 guineas; Mr. M. Stewart Smith, 55 guineas; Mr. W. M. Sadler, 55 guineas.

DEVON COUNTY ASYLUM.—There were nearly forty applications for the appointment of medical superintendent to the Devon County Asylum, Exminster, rendered vacant by the resignation of Dr. Symes Saunders. Six of this number were selected, and finally Mr. Arthur Nathaniel Davis, L.R.C.P., L.R.C.S., L.M. Edin., who has for the last seven years been medical superintendent of the Plymouth Borough Asylum, Ivybridge, was appointed.

THE LANCET.

LONDON: SATURDAY, OCTOBER 8, 1898.

IT was a happy inspiration which led the authorities of Charing Cross Hospital to invite Professor VIRCHOW to deliver the Huxley lecture on the occasion of the opening of the medical session. They could not have better honoured the name of the eminent man whose medical education was obtained in their institution than by linking it in this manner with that of the foremost living exponent of pathological science. HUXLEY, whose life was devoted to the search after truth, whose keen intellect dispersed so many dogmas and illumined the obscure places of biological problems, and whose strenuous and single-minded advocacy did so much to establish the most notable scientific conception of his time; and VIRCHOW, whose name and fame have been known to all the world for more than half a century as those of one who, gifted like HUXLEY with more than common insight, applied the teachings of biology to the elucidation of morbid processes and effected for pathology as great a change almost as Darwinism did for the science of life,—it is well that these two names should thus be brought into conjunction; whilst on many other grounds there could not be found one better fitted to give such a lecture than Professor VIRCHOW, whose wide knowledge and liberal sympathies entitle him to speak with an almost unique authority on the progress of medical science. For who is there among us who can tell of his own knowledge the wondrous tale which has been unfolded before the eyes of this master during the years in which he has been engaged in scientific investigation? Nor has he been a mere passive onlooker whilst the tide of discovery has been bringing fresh treasures to his feet. All the world knows that had it not been for Professor VIRCHOW pathological science would have remained in a state of crudity and of vague speculation. The fundamental idea of the "cellular pathology" which he promulgated awakened a new interest in, and gave a new meaning to, morbid processes. It remains essentially unshaken to the present day, although in matters of detail modifications have been made from time to time, many of these accessions to knowledge having been made by men directly inspired by Professor VIRCHOW himself.

Our position to-day in regard to this question is that it dominates all our views of organic life. We can no more conceive of organised structures, exhibiting vital phenomena, whether the simplest or the most complex, without reference to the "cell" as the unit, than we can conceive of the sun apart from light and heat. Nevertheless, the biologist and the pathologist are bound to confess their inability to solve the whole problem of existence. It was much, very much, to impress on the imagination the fact that the cell is the simplest form in which life is manifested; that the changes wrought in the organism by disease can be referred to changes in which these ultimate living elements take part, but the nature of life itself baffles the keenest intelligence. Professor VIRCHOW alluded to the overthrow of the theory of "free-cell-formation," which, as he said, amounted to a revival of the older doctrine of spontaneous generation. He defined the organism as a "social" not an "individual" mechanism, made up of cells themselves composed of inert chemical substances; but he did not pretend to say—and herein we have the best example of the ignorance of the wisest—to what the cell owes its life. All we do know and all we can say is that since life first appeared on this earth there has been a continuous and unbroken ever-extending chain of living elements derived from pre-existing elements similarly endowed. The application of the doctrine to pathology was, as we have said, Professor VIRCHOW'S great service, and nowhere has it been more surely confirmed than in the domain of new growths. It may be that the actual cause of these abnormal and destructive formations will some day be discovered; but whatever it be it cannot upset the certain knowledge which we have of their intimate structure and their origin from pre-existing elements in the body. That the problems of hereditary transmission, whether of actual characteristics or deformities, or of tendencies to disease, are better explained by virtue of the potencies contained within the parent cells than by any fancied changes in the blood or fluids of the body, can hardly be questioned. These fluids are but the media whereby the tissue cells obtain their nutriment and whereto they part with their products. The cells themselves are the active and living entities which exist in the ovum before the formation of blood and lymph and are directly derived from the two sexual elements without the conjunction of which no new organism can be built up.

Perhaps the most interesting portion of this lecture—if one part could be said to be of greater interest than another—was the exposition of parasitism and the great extension which has been given to this in the discovery of the minute parasitic agents which excite the infective diseases. Professor VIRCHOW did well to remind us that the reaction of the tissues and organs to the bacterial poisons forms an essential part of these diseases, and he, perhaps wisely, bade us remember that there may be some infections in which bacteria have no share. But to the incalculable gains to humanity arising from the recognition of these agencies he bore ample witness, and instanced the work of LISTER and the introduction of serum therapeutics as evidence of this. We must not conclude without expressing our gratification that Professor VIRCHOW should have selected this theme for his address, which is sure to dwell in the memory of the young students who formed the essential part of his audience. Certainly they could have no better examples to follow in their pursuit of medical science than those set by HUXLEY and VIRCHOW.

THE military despatch of Lord KITCHENER of Khartoum on the battle of Omdurman was published last week in the *London Gazette*, accompanied by one from Sir FRANCIS GRENFELL, the General Commanding in Egypt, and an Order from Lord WOLSELEY, the Commander-in-Chief. The

General Officer Commanding in Egypt having previously held the post of Sirdar of the Egyptian Army, and having had ample experience of Soudan warfare, was peculiarly fitted to form a correct estimate of the difficulties which his successor had to encounter and of the admirable skill and success with which these had been overcome. Sir FRANCIS GRENFELL tersely sums up the subject and the situation, together with the impression he had derived from the perusal of the despatch describing the latest phases of the Soudan campaign and the final action on Sept. 2nd last. The Sirdar, he says, in his despatch recounts in brief, simple terms the events of the closing phase of one of the most successful campaigns ever conducted by a British general against a savage foe, resulting in the capture of Omdurman, th destruction of the Dervish power in the Soudan, and the reopening of the waterway to the equatorial provinces.

The Sirdar in all he did was thorough. He had, no doubt, already had experience of the tactics and fierce intrepidity of his foe and an intimate knowledge of the country, but what was perhaps more to the purpose he possessed the initiative capacity and judgment requisite to turn these to the best account. Having left nothing to chance it appeared that the campaign would be run with the regularity of machinery; and, that being the case, he foresaw and boldly declared what the end would be—and he was right!

It is eminently gratifying to find that a general has been found endowed with such high military qualities and the necessary force of character to have the courage of his opinions, endowed at the same time with a spirit of justice and even generosity in regard to all those who had so largely contributed to the success of his undertaking. Nor should it be forgotten that, from a political standpoint also, he has apparently acted throughout with excellent discretion and judgment. The medical services—British and Egyptian—are to be congratulated on the handsome way in which they are mentioned in his despatch.

"The Medical Department was administered with ability and skill by Surgeon-General TAYLOR, principal medical officer, who was well assisted by Colonel MACNAMARA, whilst the medical organisation of the Egyptian army fully maintained its previous excellent reputation, under the direction of Lieutenant-Colonel GALLWEY and his staff. The general medical arrangements were all that could have been desired and I believe the minimum of pain and maximum of comfort procurable on active service in this country was attained by the unremitting energy, untiring zeal, and devotion to their duty of the entire medical staff."

We are glad to notice that while the zeal and administrative capacity of Surgeon-General TAYLOR, as principal medical officer, are appreciatively recognised, the services of Colonel MACNAMARA are not forgotten, for he had all along laboured hard and well at his work. It was also fitting that Sir FRANCIS GRENFELL, in calling attention to the arduous duties performed by the staff and departments at Cairo, should have included the name of Surgeon-General H. S. MUIR, upon whom much extra responsibility and work must have fallen in connexion with the Soudan expedition. The previous Nile expedition for the rescue of GORDON—the most chivalric figure of this century—at Khartoum was unhappily, as we all know to our cost, unsuccessful. The Egyptian war of 1882 was, however, most successful, and notwithstanding that almost everything had to be sacrificed to celerity of movement on that occasion, the surgical and medical results attained were splendid. Still, the medical service was very differently treated then—"but that's another story." We may allude, in conclusion, to one gratifying feature in the Sirdar's despatch which we do not remember to have seen before—namely, the frequent mention of non-commissioned officers and privates, and among them of men of the Royal Army Medical Corps, in the long list of names appended to the despatch.

DIFFERENT minds will be differently affected by the various discourses upon subjects more or less intimately connected with the medical calling, as given in the Introductory Addresses which we report to-day There certainly is a great variety of topics. Professor MICHAEL FOSTER, to whose address we shall refer on another occasion, restricted himself very much to one point—the nature of a university as distinguished from that of a college or a school. But for the most part the lecturers allowed themselves a free scope, descanting on various subjects, from the value of a "good bedside manner" to the deepest questions of medical science and medical duty. After all, it does not greatly matter on these occasions what particular subject is taken. The medical art is so wide in its relations, it concerns human life so deeply, it so affects States and armies and society itself, it touches so nearly questions of philosophy and morals and politics, that from whatever point of view the introductory lecturer may look at his theme he can scarcely fail to excite interest in his audience and in that larger audience outside, to which many of the addresses are obviously directed. Medical matters are evidently becoming of more and more interest to the public. With all its criticism of the profession and in spite of the tendency of certain minor sections to regard themselves as equal without medical guidance to cope with the problems of disease, whether affecting the nation or the individual, there is a growing perception of the importance of the medical calling and of everything affecting the efficiency of the schools in which its followers are trained.

We do not now attempt to discuss or even summarise all the points raised in addresses of such varied scope, but we select a few which appear to us to be of special interest and importance. We note with much satisfaction that several of the lecturers referred to the subject of over-examination. Sir JAMES CRICHTON BROWNE, who may be supposed to speak on this subject with special authority, spoke of the stupidity manufactured by examinations. Dr. CULLINGWORTH expressed entire agreement with Mr. TEALE'S expressed opinion that the medical student is over-examined. We are sure that students will be grateful to such authorities for speaking so clearly on this subject, though there would have been greater cause for gratitude if some practical remedies for an evil which is now generally admitted had been indicated. The students who are now beginning another session must not count upon any immediate change in the system of examinations which has now grown to such proportions.

This system cannot be altered in a day or by any individual body; but with a consensus of opinion against it it is certain to be modified. We are not apologists for ignorance and still less for idleness in students. We are under no delusions as to the justice with which many of them are "referred" for further periods of study. But it is clear from the opening addresses this year and from other sources of evidence that Mr. TEALE has a large following in thinking that the existing system of examinations is excessive and injurious. For all fair examination few students will be unprepared who enter into the spirit of the words of the oath of HIPPOCRATES, which might well be hung in the room of every student for the remainder of the session, or, for that matter, for his lifetime. He will attain to no age and to no position in which the spirit of that oath will not be helpful to him. But more modern wisdom than that of HIPPOCRATES will be found in this year's addresses, and the observance of but a fraction of the advice which they contain will make all study interesting and will do much to secure success in practice as well as in examinations. There is a danger, said Dr. VORLCKER, in his address at Middlesex Hospital, of students forgetting their own essential share in the success of their studies. There is a risk in the very care with which every lesson and demonstration is now elaborated for them. Every fact in anatomy and every feature of disease should be ascertained by the observation of the student and not merely read about in a book. The risk of prepared food for infants, with its rachitic results, is not more real than is the risk that work done for students in a way which leaves them no work to do for themselves will destroy their power of working.

Amid much that is dispiriting in the circumstances of the profession and in the attitude of the public it is impossible not to refer to the responsible nature and wide functions of the medical life. These points were very strikingly brought out in the address of Dr. H. A. CALEY, who spoke at length on the preventive as distinguished from the curative function of medicine. People are apt to think that the preventive function applies only to infectious and notifiable diseases. But the duty of the true physician is far wider than this. He must impress upon his patients that degeneration as well as infection can be prevented. Neither will he find this impression easy to convey, for there is a singular want of intelligence in the public in this respect. It will take great pains and go to great expense to arrest the degeneration of a tooth, as Dr. CALEY says, while it will take no thought for the degeneration of an aorta or a kidney. We may hope that with improved education such apathy will not exist and that the public will learn to prize a physician who averts disease as much as it respects him who heals. The more the practitioner fits himself for such high duties, the more in the long run will he be respected by the public and by his patients, and the more will he be differentiated from all quacks and nostrum-dealers.

At St. George's Hospital Mr. TURNER chose a very practical topic. He exposed with much force the abuse of medical charities and denounced with much justice the cult of altruism which is pursued at other people's expense The question is a very large one and one calling for the serious consideration of hospital surgeons and physicians. We hope that Mr. TURNER and his colleagues will take other opportunities of raising the subject.

Annotations.

"Ne quid nimis."

THE DANGEROUS TRADES COMMITTEE.

A FURTHER blue book containing the third interim report of the Departmental Committee appointed to inquire into, and report upon, certain miscellaneous dangerous trades has been issued. From a glance at the contents of the report it is clear that the committee have not yet inquired into the use of lead in certain arts and of its effect upon the operatives concerned. It may fairly be presumed, since this subject has been brought so prominently into public notice during the last year, that the committee will devote more than ordinary attention to it and extend their inquiries to the potteries. For this they will, we anticipate, await the findings of Dr. T. E. Thorpe and Dr. Thomas Oliver, who have recently been appointed as experts to inquire into the conditions obtaining at the potteries where lead glaze is employed. Dr. Oliver serves also on the Dangerous Trades Committee. The report under notice deals with file cutting, galvanised iron works, sole stitching by American machinery, glass polishing, the use of converters in metal works, the manufacture and use of grindstones, the testing of bottles by compressed air, and the "ending and mending" in velvet works. In regard to the industry of file cutting the committee find that the situation is full of difficulty and complexity. The spirit of the law is now constantly violated, and they venture confidently to recommend legislation on certain lines sketched in the report which, if adopted, will provide a means of adequately safe-guarding the health of persons engaged in this industry. In regard to galvanised iron works the committee do not consider the industry one which should be scheduled as a dangerous trade and while making certain observations they do not think it necessary to recommend special rules for its control. In the same way there is little evidence to show that any specific injury to health is caused by the American method of sole stitching. Several recommendations are drawn up in regard to providing better conditions for the operatives engaged in glass polishing, the chief and perhaps most important of which is that every facility for washing should be provided by the employers and that no man should be allowed to eat his meal without having previously washed his face and hands. The dangers attending the operations connected with the use of converters, as in the Bessemer process of steel manufacture, have been thoroughly gone into. The chief danger appears to be the spilling of molten metal and recommendations guarding the workers against this are drawn up. A considerable proportion of the report is devoted to the dangers of working involved in the manufacture and use of grindstones. Here the chief risk appears to be the "flying" of grindstones of defective composition. Accordingly it is recommended that the stone should be thoroughly tested before being employed for grinding or smoothing purposes. To this end attention should be paid to the detection of cracks and flaws by special means. In regard to the testing of bottles by compressed air the committee have not found any serious record of accident, but they remark that it is desirable that legal powers should be given to Her Majesty's inspectors to require the adoption and use everywhere of gauze veils and

gauntlets. Lastly, the committee find that the operations attending the "ending and mending" in velvet works are without injury to health, so that the committee have requested and obtained the permission of the Secretary of State to have this trade withdrawn from their reference.

THE WINTER SESSION OF THE MEDICAL SOCIETIES.

DURING the present month the various medical societies of London will reopen their doors. The first to resume will be the Medical Society, the opening meeting of which will take place on Monday, the 10th inst. The newly elected president, Mr. Edmund Owen, will deliver an inaugural address, and Dr. Allchin will read a paper on Some Considerations Preliminary to the Study of Dyspepsia. The secretaries have already secured papers from Mr. Marmaduke Sheild, Dr. Sidney Martin, Dr. Sidney Phillips, Mr. Pearce Gould, and others to be read early in the session. The Royal Medical and Chirurgical Society will open on the 25th inst. under the presidency of Mr. Thomas Bryant. Some important papers are promised but at present no arrangements have been made for any special discussions such as that on enteric fever which attracted such large audiences last session. The Clinical Society will meet for the first time on the 14th inst., when the president, Mr. John Langton, will deliver the opening address which he postponed last year. The second meeting, on the 28th inst., will be a clinical evening. The Pathological Society, with Dr. J. F. Payne for the second time in the chair, will start the work of the session on the 18th inst.

THE INFECTIVENESS OF MILK IMPORTED INTO MANCHESTER.

A REPORT recently presented to the sanitary authorities of Manchester by Dr. James Niven, the medical officer of health, upon the Bacteriological Condition of Imported Milk with Special Reference to Tuberculosis, reveals a very serious state of matters. Samples were taken at railway stations and other places to the number of 100 and of these 93 were carefully examined by Professor Delépine. Of these 93, 17, or over 18 per cent., were proved to be tuberculous. The next step was to examine the condition of the cows at the incriminated farms and the results of the investigation confirmed in a most remarkable way the bacteriological examination. 16 farms were investigated and in 14 of these one or more cows were found to have indurated udders, presumably tuberculous. In a previous report presented to the committee it was mentioned that on the examination of one cow with tuberculin the udder, which had not previously been found to be tuberculous, gave a marked local reaction. It is, in fact, evident that an udder may be infectious and yet give no palpable indications of disease, a consideration which may well explain those instances in which Bang and others have found the milk to be infective without any appreciable disease of the udder. The report goes on to advise the sanitary authorities to apply to Manchester the provisions existing in Glasgow for the safeguarding of the purity of milk. These provisions, which are under the Glasgow Police Amendment Act, 1890, give power to sanitary authorities to enter byres, to compel the owners of cows to assist the medical officer in his investigations, to make it necessary for intimation to be given of diseased cows, and to provide penalties for selling the milk of diseased cows. The question of tuberculosis among dairy cattle is a very serious one. Although we have had a Royal Commission on the matter the only person who appears to have even attempted to act upon it is Lord Vernon. Medical officers all over the country are agreed upon the necessity of steps being taken to minimise the plague, and we may well ask, if a small and poor country like Denmark can do what she has done to stamp out tuberculosis in cattle, why should not Great Britain and Ireland do the same?

COMPARATIVE LONGEVITY IN THE COUNTRIES OF EUROPE.

ACCORDING to the *Bulletin Général de Thérapeutique* the average duration of life amongst the chief nations of Europe is as follows, the figures being based upon the bills of mortality for the decade 1881–90: Sweden and Norway, 50 years; England, 45 years and 3 months; Belgium, 44 years and 11 months; Switzerland, 44 years and 4 months; France, 43 years and 6 months; Austria, 39 years and 8 months; Prussia and Italy, 39 years; Bavaria, 36 years; and Spain, 32 years and 4 months.

STREET RUFFIANISM.

HOOLIGANISM has culminated, as is only natural, in murder. Early on the morning of Oct. 2nd a policeman on point duty near the Regent's Canal heard sounds of quarrelling in Wilmer-gardens. On proceeding to the spot he found a crowd of persons angrily disputing. Picking out an apparent ringleader he attempted to arrest him, when a man promptly stabbed him. Two more policemen then came up and arrested the alleged assailant. The injured constable was taken to the Metropolitan Hospital where he died. Tinkering with this sort of thing is no use. Short, sharp, and decisive measures are necessary; the police should be better armed, with revolvers if necessary. In all cases of brutal assault, whether on ordinary citizens or the police, magistrates should have power to order—or rather should be compelled to order—a sound flogging. Amusements, free drinks, free libraries, free education, six months' holiday at the seaside paid for by people who work, and other softening influences, may possibly be considered at a later date; but in the meantime the wild beasts of London should be treated as harmful animals are elsewhere and suppressed. In saying this it must not be supposed that we are insensible to the lack of healthy amusement for portions of the community which is evident in London. Mrs. Ormiston Chant points out in a very sensible letter in the *Times* of Oct. 4th that there is no reason why a "hall" should not supply a bright, cheerful, and elevating entertainment. Everyone will allow that within the last twenty years the standard of entertainment by the halls has been enormously raised. Mrs. Chant's plea for a good and cheap restaurant to be opened in connexion with a music hall is a very good one. But before ameliorating the ruffian's general condition he must be made to understand by the medium of bodily suffering that "Hooliganism" will not be allowed any longer.

INFANTILE DIARRHŒA.

AN article on the Summer Diarrhœa of Infants by Dr. G. Variot in the *Journal de Clinique et de Thérapeutique Infantiles* of Sept. 22nd derives an especial interest from the prevalence of that disease during the recent hot weather. The writer, as might be expected, has limited his attention practically to one form of diarrhœa, that which is associated with lactic fermentation and which is naturally most prevalent during a warm summer or the after-glow of a mild autumn. It is true that Dr. Variot's views on the influence of a high external temperature are at least novel, since he regards the pathological changes in the intestine which give rise to this form of diarrhœa as due to actual insolation. He believes that those changes are thus produced in the case of infants nourished on sterilised milk as well as in those fed on milk not sterilised and even in

those suckled at the breast. He admits nevertheless that the loose motions observed in the last case are unattended by any of the local or general distress associated with fermentative or choleraic diarrhœas. The main argument in his paper, moreover, is employed to promote the use of cows' milk sterilised by heat as opposed to that not so treated where the breast is not available, and this on the ground of its freedom from morbific organisms prior to its use. In support of this argument he quotes a series of 110 recorded cases of diarrhœa in children fed on sterilised milk which gave a total mortality of 9. He considers that even that low figure should not have been reached had the children, out-patients at a dispensary in Paris, been tended by their parents with a more intelligent accuracy and amid sanitary surroundings. He alleges that the majority of fatal cases occurring under his care at the Hôpital Trousseau were patients brought up on ordinary sterilised milk. From these facts he draws the only possible conclusion—namely, that any approach to certainty in the prevention of infantile diarrhœa can only be attained by sterilisation of the milk used. Exposure to a temperature of 115°C. will suffice for this purpose, but 100°, which is with many the customary standard, will not suffice. Unfortunately sterilised milk is somewhat expensive, but its place may commonly be filled with little if any risk to the consumer by ordinary milk delivered fresh and boiled. It is also to be remembered that however sterile the milk may be it is constantly liable to contamination by the feeding-bottle or other vehicle of administration. The importance of keeping this thoroughly cleansed, of using different bottles alternately, of frequently boiling them and any tubes attached to them, can be hardly exaggerated. We are pleased to observe, as a result of constant reiteration by medical men and other instructed persons, a marked extension of knowledge on this subject. To this more than to any other agency we must look for the prevention of what is probably the most deadly scourge of infant life. Whatever importance we may attribute to the action of heat on the body or to variations in subsoil moisture it is, we believe, indisputable that such influences operate—certainly as a rule—not on the body itself so much as by vitiating the natural food of infancy.

THE NICE ADJUSTMENT OF CORPORAL PUNISHMENT.

IN the *Times* of Oct. 4th there is a short letter by an anthropologist who thinly veils his identity under the initials "F. G.," pointing out that in estimating the amount of pain inflicted by corporal punishment it must be borne in mind: (1) that the worse the criminal the less sensitive he is to pain; and (2) that the pain produced does not vary with the force of the blow, but "approximately, according to Weber's law, four times as heavy a blow only produces about twice as much pain." "F. G." does not state what conclusions or modifications of existing practice should be deduced from this, but we may be allowed to point out a fallacy with regard to each of the points which he raises. It is quite true that the habitual criminals and degenerates studied by Lombroso were proved to be less sensitive than normal individuals, but we doubt if the after-part of a boy who for amusement risks wrecking a train by placing stones on the line is less sensitive than that of his better-behaved schoolmates. And there are many first offenders who would certainly feel a whipping as acutely as any average man. With regard to the deduction from Weber's law, even assuming that the law holds with stimuli of such intensity, "F. G." seems to be thinking merely of the sensation produced by the contact of the birch or "cat" with the skin. But every boy who has been caned knows that the after-smart is a very serious item in the punishment, and with the heavier blows, owing to the injury of the deeper tissues and the resulting inflammation, the total amount of suffering produced would certainly be greater than that theoretically deduced by an application of Weber's law. The frequent use of the "cat," on account of the injuries and lacerations it produces, is repugnant to modern ideas, but a cane or a good birch wielded by a strong arm will inflict very severe punishment without serious risk of injury. We fear that physiological psychology has not advanced sufficiently to enable even an expert to adjudge so many units of suffering, and at present the matter may safely be left to the common sense and discretion of the judges and magistrates, who might wisely, we think, have a much wider discretion in the matter than they at present possess.

THE PLAGUE IN INDIA.

WE regret to state that there is at the present time no sign of improvement in regard to bubonic plague in India. According to the latest telegrams the plague returns for the week ending Oct. 1st show a serious recrudescence of the disease in Bombay city, 209 deaths being reported, as compared with 127 in the previous week. In Bombay Presidency the number of deaths increased from 3000 in the previous week to 4000, chiefly in Dharwar, Belgaum, Satara, and Kolhapur. Calcutta is free, and only one death is reported from Karachi, but the plague is becoming epidemic in Bangalore city, where 124 deaths have occurred. 3 cases are reported from Hyderabad State, 3 from Wallunden in the Punjab, and 16 in 4 districts of Madras. The quarantine and severely repressive measures which have been favoured hitherto have, as we all know, given rise to a great deal of native discontent and opposition, and as they have not been attended with the successful results which were anticipated or hoped for, the Government of India has had to relax them. The progress of the epidemic in India is conforming to what has been the history of plague elsewhere in the past and in China, the enforcement of land quarantine is attended with serious hardships and is, moreover, simply impracticable; the natives would prefer to run the risk of contracting plague to submitting to the severely repressive measures hitherto enforced. As a matter of policy the Government is justified in relaxing them under the circumstances in which it is placed.

THE FIFTH INTERNATIONAL CONGRESS OF HYDROLOGY, CLIMATOLOGY, AND MEDICAL GEOLOGY.

THIS Congress was held during last and part of the present week at Liége (Belgium), under the patronage of H.R.H. the Crown Prince of Belgium and the presidency of M. de Bruyn, Minister of Agriculture. The Congress was well attended by representatives of various nationalities. Many important communications were read and discussed in the various sections, but the most interesting was a conference given before the whole Congress by Walthere Spring, the distinguished Professor of Chemistry at the University of Liége, on the Colours of Natural Waters, in which he showed experimentally that the true colour of pure water is blue, as in the Lake of Geneva, and that this colour is the colour proper to the water and is not due to a mere reflection from the surface or to suspended particles in the water; and that when pure water has a very slight cloudiness due to the presence of finely divided nearly white or colourless particles in suspension, even if these are absolutely colourless, as in the case of very finely divided rock crystal, a yellow tint is given to the water, which, together with the natural blue proper to the water itself, produces a green colour, as in the cases of the lakes of Neufchatel and of Constance. He remarked that

it had been noted by various observers that the waters of certain lakes ordinarily green became occasionally absolutely colourless, and this he showed was due to the washing into the lakes of a fine mud of a reddish tint, due to oxide of iron, which neutralised the green colour of the water, rendering it for the time being perfectly colourless. Interesting excursions were undertaken to view the bathing establishments and sanitary arrangements of Ostend and Middlekerke, Spa, Chaudfontaine, and Aix-la-Chapelle. The Sanitary Institute was represented at the Congress by Dr. Corfield, the Professor of Hygiene and Public Health at University College, London, who was elected an honorary vice-president of the Congress and was also appointed the English member of an international committee which was formed for the purpose of inquiry into the means to be adopted for the preservation of the purity of the sources of natural mineral waters.

RAIN-MAKING.

THE drought still continues but the bright clear sky during the present week has disappeared, very little sunshine has been recorded, and the British Isles have been wrapped in clouds. But the clouds seem loath to part with their load of precious water, a reluctancy which must be most exasperating to water directors and water engineers. The atmospheric pressure is high and the conditions have been such as to militate against the coalescing and ultimate descent of the particles of water which are so near at hand in large quantity and yet apparently beyond realisation. Scientific research has not been, so far as we are aware, seriously turned to the possibility of tapping the clouds, but in these days when it is considered feasible by the leaders of science to derive the food of man indirectly from the air the suggestion is not so absurd as it might seem. Ordinary raindrops are formed by the coalescing of a number of the smaller particles which compose cloud. Can, therefore, no means be devised of effecting this coalition, of uniting the smaller particles into particles which at length become so large as to drop to the earth in the form of a blessed rain? The water companies might devote a sum of money towards the practical investigation of this matter or at any rate might institute a committee of inquiry of scientific men with a view to discussing the possibility of being able to induce a result on the lines indicated.

THE COMPARATIVE ETIOLOGY OF DIPHTHERIA.

THERE is no section of comparative pathology of such great importance to the medical practitioner as that which deals with the interchanges of disease between man and the lower animals. A series of observations recently collected by the French Conseil supérieur d'Hygiène and quoted in the *Journal de Clinique et de Thérapeutique Infantiles* of Sept. 22nd, 1898, is therefore of particular interest. The subject under examination is diphtheria and the facts recorded are at least significant. From these it appears that the cat is especially liable to contract this disease and is also necessarily a ready medium for its propagation. Other animals, however, are also liable to it. Thus Gerhardt relates the case of a number of fowls imported into a village near Baden which on arrival developed signs of a disease resembling diphtheria, half of them dying from it. 4 cats which lived among them died from the same disease and 4 out of 6 attendants at the poultry farm suffered severely in like manner. No case occurred in the village itself. Another case is mentioned by Dr. R. Jacobi in which 5 children had diphtheria and 3 kittens which had played with them during their illness died with false membrane on the pharynx. In another instance recorded by Dr. Bruce Low a cat appeared to have carried diphtheria to children. It is noteworthy that the bacillus of Klebs and Löffler cultivated by these observers in the rabbit has given rise to the usual signs of diphtheria, including the subsequent paralysis, and that the observations of Klein on the cat have confirmed their results. Such facts as these are certainly not without meaning when we consider to how large an extent the lives and habits of children are associated with those of their various domestic pets. They may also serve to explain the occurrence of some sporadic cases of diphtheria for which no recognisable cause can be found, but where it is learnt after a time that a sick rabbit or cat was being nursed for a time before the child's illness appeared. It would seem also that in some cases a connexion exists between the yards or kennels in which animals are housed and the occurrence of tonsillar sore-throat in adjacent dwellings. We would commend these considerations to the attention of practitioners and of local sanitary officials, more especially since that which happens in the propagation of diphtheria probably occurs also in the case of other infectious diseases.

THE OUTGOING LORD MAYOR.

WE wish to add a few words to the vote of thanks which the Corporation of the City of London has accorded to Lieutenant-Colonel H. D. Davies, M.P., Lord Mayor, on the occasion of the election of his successor, Sir John Voce Moore. The Lord Mayor in his reply to the thanks of his brother aldermen modestly omitted reference to his hospitality at the Mansion House, but there is one circumstance about this hospitality which calls for a few words of reminiscence. By the medical profession the year of office of Lieutenant-Colonel H. D. Davies, M.P., will be remembered as the year when the City of London through their Lord Mayor publicly honoured the medical profession by inviting to dinner at the Mansion House the presidents of the Royal Colleges and other representative members of the medical profession. This was the first time that the medical profession had received attention from the chief magistrate of the City of London and we owe Lieutenant-Colonel Davies thanks for the precedent and for his graceful hospitality.

COMPLETE RUPTURE OF THE TRACHEA.

AN instance of this rare lesion occurred recently in a man, aged seventy-three years, who was struck by a lift on the back of the head as he was looking down the shaft, with the result that he was knocked down, breaking his sternum. He survived the accident in St. George's Hospital fourteen days, and at the necropsy it was found that the trachea was torn completely across. Although the injury is very rare many cases have been recorded in medical literature. The cause of the accident has generally been a severe blow or the passage of a cartwheel over the throat; in one case it was due to a forcible bending backwards of the head. Urgent dyspnœa and much subcutaneous emphysema are the usual symptoms and death generally occurs within a short time, but, though death is the common termination, recovery has ensued in at least 3 cases—in 2, recorded by Lang and Wagner, without tracheotomy, and in 1, recorded by Lauenstein, in which the trachea had to be opened. It is not improbable that in the case referred to above the fatal result was due to the other injuries sustained rather than to the rupture of the trachea.

PROFESSOR KOCH ON MALARIA.

OUR Rome correspondent writes: "After forty days' unremitting work in the clinical offices of the Santo Spirito Hospital and in the laboratories of the Public Health Department, Professor Koch, on Saturday evening (Oct. 1st), took grateful leave of the Premier (General Pelloux) and the Minister of Public Instruction (Dr. Baccelli), who had

aided him so materially in his researches, and, accompanied by his coadjutors, Professor Pfeiffer and Professor Kossel, started direct for Berlin. One of the objects he had in view was to ascertain how far the Italian malaria coincides with the tropical form of the same malady, and he has satisfied himself that in all essentials they are identical. He has also been able to indicate properties hitherto unnoticed in the pathogenic germ of malaria as found external to man—properties possessing a distinct prophylactic value towards limiting the diffusion of the malady if not in arresting it at its point of origin. He has, however, to supplement this part of his researches by others on the same lines, and with this object he intends to return to Italy in the spring of 1899. So far he has found nothing to add on the clinical side of the subject; and the Roman school do not disguise their satisfaction at this frank testimony to the practical worth of their painstaking contributions to treatment. They, in turn, are profuse in their acknowledgments of Professor Koch's scientific elucidation of points hitherto left obscure and are grateful for the impulse he has given to the investigation of problems the solution of which seems now 'within measurable distance.'"

THE ROYAL COMMISSION ON SEWAGE DISPOSAL.

THE Royal Commission which has been appointed to study and report on the question of sewage disposal is now engaged in visiting a number of sewage works. Recently the members of the Commission were in Exeter, where they thoroughly examined the "septic tank" process which has for some considerable time past been dealing with a portion of the sewage of Exeter, and they also inspected the same process in operation at the country seat of Lord Iddesleigh, chairman of the Commission, a few miles from Exeter. The Commissioners have inspected the Manchester Sewage Works at Davyhulme, and also the works at Oldham, at Chorley, and at Rochdale. We understand that shortly after these visits are completed the Commission will resume its work of taking evidence in London and of inaugurating a series of scientific experiments on its own account. The Commissioners engaged in these inspections have been Lord Iddesleigh, Sir Richard Thorne, General Carey, Dr. Russell, Professor M. Foster, Professor Ramsay, Colonel Harding, Mr. Killick, and Mr. Cotton.

THE LOCAL GOVERNMENT BOARD FOR SCOTLAND: THE NEW MEDICAL MEMBER.

DR. JAMES B. RUSSELL, the distinguished medical officer of health of Glasgow, has been appointed to the important post of medical member of the Local Government Board for Scotland. The long and valuable services which Dr. Russell has rendered to sanitation in Glasgow and in Scotland are well worthy of the highest honour and reward which it is in the power of the Government to bestow. Dr. Russell was appointed to the health officership of Glasgow on the retirement from that post of Professor (now Sir William) Gairdner in 1872, and before that time he had been in the service of the city as physician to its fever and small-pox hospitals. He had much to do with the huge municipal improvement scheme which has so greatly and so beneficially changed the face of Glasgow and he was among the earliest to demonstrate on a large scale the conveyance of infectious disease by means of milk-supply. In all the literature of small-pox and vaccination there is perhaps no finer monograph than his "Study of 972 Cases of Small-pox," published in 1872. Many of his writings are among the classics of public health literature and it is difficult to say whether they are more distinguished by the true spirit of the sanitary reformer or by their writer's rare mastery of the English language. Dr. Russell will bring to his new duties a unique experience in Scottish sanitary administration and he will find before him a field well worthy of the exercise of his highest powers. While very much has been done within the last few years to improve the condition both of the large cities and of the rural districts of Scotland, more yet remains to be done, and many of the smaller burghs are, sanitarily speaking, still untouched. Dr. Russell's post will therefore be no sinecure and it would, indeed, be impossible to imagine him making a sinecure of any post. Not seldom it falls to a new official to map out his own sphere of duty and to inform those with whom he is brought most closely into contact as to the true scope and bearings of his own work. Dr. Russell may quite conceivably meet with this experience, and if so there is no one to whose views more weight will be given by those who are in authority. The office to which he has been appointed is a great one and in his hands it will be greatly magnified. In wishing him God-speed we venture to think that we are expressing the sincere desire of every member of the public health service of Scotland.

STREET NOISES.

TWO new by-laws passed by the London County Council for the better regulation of street noises became law on Oct. 1st. The first deals with steam organs, shooting galleries, roundabouts and the like, and provides that they shall not be used or played in any street or on any land adjoining thereto to the annoyance of residents or passengers or to the obstruction or danger of traffic. The second by-law deals with noisy animals, to secure the removal or abatement of which a somewhat complicated process has to be gone through. These by-laws are small mercies but they are something to be thankful for. They leave untouched the piano organ, the German band, the Salvation Army, and that greatest curse of all, the newspaper "runner" and the wandering voice which yells "Winner" almost incessantly from two until six P.M. The publication of a "Winner" card apart from a newspaper is a new torment. The immunity accorded to the newspaper fiend is a blessing for which Londoners have to thank Professor Stuart in the main, for it was owing to his opposition that the admirable by-law introduced by the Council in the summer was defeated. The wandering costermonger is comparatively harmless and fills a useful place in the economy of London. But newspapers can be sold and are sold every day and all day in the streets without howling, therefore there is no reason why the streets should resemble the parrot-house at the Zoological Gardens. But we sincerely congratulate the Council on having attempted to deal with this nuisance, and even have hopes that before very long the selfishness of those who consider that everyone has a right to annoy anybody else will be overcome. If the objectors to the by-law were compelled to work in the Strand or Piccadilly-circus for a time they would change their tune. Meantime we must possess our souls in patience.

THE GREIG SMITH MEMORIAL THEATRE AT BRISTOL ROYAL INFIRMARY.

THE Greig Smith memorial operation theatre was opened by Sir William MacCormac, President of the Royal College of Surgeons of England, in the presence of a large gathering of the citizens on Sept. 30th. The new operation theatre stands on the site of the old one and consists of a principal operation theatre with students' gallery, smaller operation theatre, anæsthetic room, and surgeons' room, also a small ophthalmic operation room. The size of the principal theatre is 21 ft. 4 in. by 15 ft. 6 in. and 26 ft. 6 in. high; a bronze medallion of the late Mr. Greig Smith has been inserted

in a prominent position of the wall. The cost of the undertaking has been about £2700. The High Sheriff (Mr. Richardson Cross, F.R.C.S. Eng.) presided at the ceremony and amongst others present were the Duke and Duchess of Beaufort, the Dean of Bristol, Sir W. H. Wills, M.P., and Mr. J. S. Fry. Sir William MacCormac, in the course of an interesting address, said that it gave him much pleasure to open the beautiful new operation theatre; it was worthy of their ancient infirmary, which was one of the oldest in the country out of London. Sir William McCormac added that not only Bristol, but England—surgery, indeed, everywhere—deplored the premature loss of Greig Smith. He was a great surgeon and a modest man. His indomitable energy wore out the machine at the early age of forty-three years, but his work on abdominal surgery lived after him and would continue to live. At the conclusion of the address the Duke of Beaufort proposed a vote of thanks to Sir William MacCormac; this was seconded by Dr. Shingleton Smith and carried with hearty applause.

HONOURS FOR THE PRINCE OF WALES'S MEDICAL ADVISERS.

SIR WILLIAM MACCORMAC, Bart., and Sir Francis Laking have been appointed Knights Commander of the Royal Victorian Order, and Mr. A. D. Fripp and Fleet-Surgeon A. G. Delmege, M.D., have been appointed Members of the Fourth Class of the same Order, in recognition of their services in connexion with the recent accident met with by H.R.H. the Prince of Wales. It may be well to remind our readers that the Royal Victorian Order is bestowed upon "such persons, being subjects of the British Crown, as may have rendered extraordinary, important, or personal service to Her Majesty, her heirs and successors, and who have merited Her Majesty's royal favour." In the case of Sir William Mac Cormac, additional pleasure was, we are sure, given to the recipient by the fact that the Order was graciously bestowed upon him by Her Majesty personally. As far as we know only two other medical men are members of this Order—namely, Dr. William Allen Sturge and Dr. Henry Charles Woods, Deputy Inspector-General, R.N.

THE DINNER TO PROFESSOR VIRCHOW.

THE large and influential gathering, representative of all departments of the medical profession of Great Britain and Ireland—assembled at the Whitehall Rooms on Wednesday evening to do honour to Professor Virchow—embodied something more than the spontaneous homage which all men delight to render to one who has achieved great things. This dinner was no mere complimentary function, as was evident from the tone of the speeches which were made. It was the recognition by our profession of the inestimable services rendered to science by the distinguished guest, and also a tribute of personal attachment to him as a man whose life and character cannot but evoke as much affection as admiration. Very fittingly did Lord Lister, whose occupancy of the chair was most appropriate, propose the health of "Our honoured and beloved master, Professor Virchow"—terms which express so well the relationship which he bears to the whole medical world. For justifiably proud as Professor Virchow may well be of the many eminent pupils—some too early lost to science and the world—who have reflected a lustre on his personal teaching, he must be still prouder at the thought that there is not one of the medical fraternity who has not been influenced by his work. Lord Lister, in proposing the toast of the evening, dwelt very happily upon the versatility of the genius of the distinguished guest, his eminence as a pathologist being equalled by his reputation as an anthropologist and antiquarian, whilst during his whole career he has been prominent in the field of politics, where his voice has ever been raised in defence of liberty, truth, and righteousness. Loud and long-continued cheers, mingled with "Hochs," accompanied the drinking of this toast, and were renewed as Professor Virchow rose to reply, which he did in a speech full of expression of attachment to England—"the land of civil and religious liberty"—and to Englishmen, with especial and appropriate allusion to Huxley whose name is held in such high honour in German scientific circles. Equally happy were the speeches made by all the other eminent men selected for this purpose. Sir William Broadbent's allusion to the high state of medical organisation in the army; Surgeon-General Jameson's testimony to the enormous gains to life by the application of antiseptic surgery in the field; Sir Samuel Wilks's reference to the late Dr. Chance, the translator of Virchow's memorable book; Professor Chiene's reminder of the studies of John Goodsir; and finally Sir William Turner's well-chosen remarks in proposing the health of the chairman, these and many another feature of the evening will make it remembered as one of the most successful reunions of our profession which may be said to have inaugurated the medical session. The best thanks of all present must be due to those who so well organised the meeting—Mr. Andrew Clark, Dr. Rose Bradford, and Mr. D'Arcy Power.

THE REPORTED CARRIAGE ACCIDENT TO THE QUEEN.

WE are glad to be able to state on excellent authority that Her Majesty did not meet with any carriage accident as has been erroneously reported and that she is happily quite well.

THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

THE Harveian Oration will be delivered by Sir Dyce Duckworth on Tuesday afternoon, Oct. 18th, 1898, at 4 o'clock. Dr. W. M. Ord will deliver the Bradshaw Lecture on Thursday, Nov. 10th, at 5 o'clock P.M., his subject being Myxœdema and Allied Conditions.

THE report of the committee appointed by the Treasury to consider the desirability of establishing a National Physical Laboratory has been issued. The committee consider that the principles underlying the proposal to establish such a laboratory have been tested on a small scale at the Kew Observatory with most satisfactory results. They also record the high opinion which the Royal Society enjoys among practical workers, for they report that "nearly all the witnesses expressed the opinion that those interested in industry as well as persons devoted to the study of pure science would be willing that the Royal Society should be ultimately responsible for the proposed institution" provided that industry were suitably represented on the governing board.

A WINTER course of lectures will be delivered at the West-end Hospital for Diseases of the Nervous System, Welbeck-street, W., on Tuesdays, at 4 P.M., throughout October, November, and December. The course will consist of demonstration of cases of special clinical interest and will begin on Oct. 11th. The fee for the course is one guinea, and further particulars, cards of admission, &c., may be obtained from the hon. secretary of the Post-Graduation Course, 60, Upper Berkeley-street, W.

AT Cheltenham recently, where some 20 antivaccinationists presented themselves, the Bench refused to be "satisfied" with anything less than a sworn declaration and the question

there has been narrowed down to whether the fee of 6*d.* for administering the oath and 1*s.* for the certificate can be legally exacted. It is said that this point is to be tested, but the mere fact that objection is taken to these charges should help to open the eyes of the public to the eagerness of opponents of vaccination in searching for grievances. It will hardly be easy, we fancy, to get up much sympathy for martyrdoms due to refusal to pay the eighteenpenny fees of local courts.

THE Lettsomian Lectures of the Medical Society of London will be delivered on Feb. 6th, Feb. 20th, and March 6th, 1899, by Dr. Samuel West, who has announced as his subject "Some of the Clinical Aspects of Granular Kidney." The Annual Oration of the Society will be delivered on May 15th, 1899, by Mr. Alban Doran.

A SYSTEMATIC course of lectures and demonstrations for sanitary inspectors has been arranged at King's College, London, and the introductory lecture will be given by Dr. W. J. Simpson on Friday, Oct. 14th, at 8 P.M., when the chair will be taken by Mr. T. McKinnon Wood, Chairman of the London County Council.

THE second Hunterian Society's lecture will be delivered by Dr. J. F. Payne on Wednesday, Oct. 12th, at the London Institution, Finsbury-circus, at 8.30 P.M. Dr. Payne will take for his subject "The Increase of Cancer." Members of the medical profession are invited to attend.

THE demonstrations of cases at the Clinical Museum were resumed on Wednesday last, at 4 o'clock P.M., and will be continued weekly at the same hour. Patients should be there at 3.30. All members of the profession are invited.

MESSRS. G. JERRARD AND CO., of 107, Regent-street, announce that they have taken a photograph of Professor Virchow. Some of our readers may like to possess a portrait of the eminent pathologist.

THE Duke of Cambridge will open some time in December the new Kingston-on-Thames Victoria Jubilee Hospital, the site for which his Royal Highness presented to the borough.

WE are asked to announce that the Thursday afternoon lectures at the Hospital for Sick Children, Great Ormond-street, are free to all qualified medical practitioners.

DR. H. B. DONKIN has been appointed a Commissioner of Prisons for England and Wales in place of Captain W. J. Stopford, C.B., retired.

SHEFFIELD SCHOOL OF MEDICINE.—Dr. Dyson vice-president of the University College of Sheffield, delivered the introductory address in connexion with the opening of this school of medicine. Referring to the Vaccination Act he said its principal aims—to provide calf lymph and to facilitate the operation—had his hearty support. The much-discussed conscience clause was the one about which the fiercest contest raged. He was glad he was not a magistrate to have to adjudicate on this clause. In medical treatment he found it sometimes extremely difficult to diagnose a real subjective symptom, such as pain in the back, from an unreal one, and he felt sure many magistrates would have difficulty in diagnosing the real conscientious objection. If the profession were polled he thought there would be a large majority against this clause. The general opinion was that the clause was a retrograde step. The experiment was risky and the profession disclaimed any responsibility if an epidemic of small-pox occurred.

FOOD- AND WATER-SUPPLY AND TRADE NUISANCES IN THE ANNUAL REPORT OF THE LOCAL GOVERNMENT BOARD (1897-98).

THE twenty-seventh annual report of the Local Government Board was published last week and we may proceed to deal with three interesting sections contained therein, embracing subjects which have come more or less prominently before the public of late. Probably the question of the adulteration of food will shortly become the subject of debate by the Houses of Parliament with the view of amending the present Sale of Food and Drugs Act (1875).

THE SALE OF FOOD AND DRUGS ACT.

The annual report of the Local Government Board has become during recent years of greater interest in connexion with the Sale of Food and Drugs Act owing to the deliberations of a Parliamentary Committee which concluded its inquiry last year and presented its recommendations to the House of Commons. On more than one occasion has a Bill as the outcome of this inquiry been brought in, but no progress has been made. It is confidently expected, however, that a Bill will be introduced next session which will embody, to some extent at any rate, the recommendations of this committee and so strengthen the present Act as to reduce the practice of fraud and adulteration in all its branches to as low a figure as legislation can be hoped to accomplish. The yearly report of the Local Government Board on this branch of public health administration shows the direction in which the Act works satisfactorily and the direction in which it does not. We have again and again expressed the opinion that the failure of the Act in many particulars has in a great number of instances been the result of the negligence of the authorities to avail themselves of its provisions. Invariably when pressure has been brought to bear upon the local authorities to make use of the powers vested in them the rate of adulteration has been very materially diminished. But, as the present report shows, there are still some districts in which the Sale of Food and Drugs Act is allowed to remain inoperative. In eight jurisdictions no action whatever was taken under the Act, while in seventeen districts the number of samples examined was too small to enable a judgment to be formed of the purity of the food-supply or to have any deterrent effect upon the practice of adulteration. On the whole, however, the number of authorities who neglect to exercise their powers under the Act is becoming fewer every year. The net result of all this is that a slight increase in the percentage of adulteration over the previous year's returns is recorded. The total number of samples examined was 46,856, and of these 18,896 were samples of milk. Milk showed an adulteration of 10·4 per cent., while in the last official year the proportion of adulterated samples was 11·1 per cent. This is a slight though distinct improvement, which, moreover, occurred chiefly in the metropolitan returns. Five years ago 22·5 per cent. of the samples submitted for analysis in London were classed as adulterated. We may find in this, we think, distinct evidence of the fact of the power of the present Act to deal with offences so long as the authorities carry out the provisions with a due amount of vigilance. The report still records the imposition of small fines which are utterly incommensurate in most cases with the nature of the fraud or adulteration committed. There was, however, a slight increase in the amount of the average penalty imposed. In what particulars the Act requires revision is plainly evident from the statement that out of the 4383 samples reported by the analysts as adulterated prosecutions were instituted in respect of 2777 only. In one case, that of a sample of gin which had been sold at a strength of 4 degrees below the legal limit, the magistrate expressed the opinion that it was absurd to prosecute for so slight an offence and dismissed the case, ordering each side to pay its own costs. The authorities were thus placed in the perfectly absurd position of being fined for carrying out a statutory duty. Another point of importance in connexion with new legislation upon the subject is well brought out in the case of butter. The number of samples of butter

submitted to the analyst by private purchasers was 320 and of these as many as 175, or 54·7 per cent., were condemned. It is true that this enormously high return in regard to adulteration may be accounted for by the fact that only those samples which had aroused suspicion had been selected for analysis. Still, the results suggest an improved system of collecting samples for analysis. It should be added also that 34 per cent. of the general samples obtained by private purchasers were condemned. This figure is nearly four times the figure given as representing the extent of adulteration of samples obtained in the official manner. Further, there are probably many classes of offence which the operations of the present Act do not reach at all, and it is with these that a new Act will deal if it be based on the lines of the Bill introduced but dropped last session. Coming to drugs, the number taken for analysis is altogether inadequate and quite out of proportion to the number of samples of food. There were only 1964 examined and of these 10·5 were condemned.

THE METROPOLITAN WATER-SUPPLY.

The reports of Major-General Scott and of Sir Edward Frankland on the quantity and quality of the water-supply respectively are of especial interest at the present time in view of the critical state of affairs in the East-end of London, although, of course, they were written before the drought occurred. A comparison of the present reports with the reports of 1896 will show very little difference in their import. Indeed, many of the paragraphs are precisely the same, word for word. This probably accounts for an official blunder. Major-General Scott's report opens in the usual stereotyped way, and afterwards when he refers to Sir E. Frankland's report he says, as he said in exactly the same terms last year, that "at the request of the Associated Metropolitan Water Companies Sir E. Frankland has extended his monthly examinations to the chemical, physical, and bacterioscopic condition of the raw river water at the intakes of the several companies and to the bacteriology of the water as it issues from the filters of each company and before it is pumped into the distributing mains." Now, Sir Edward Frankland has not presented a bacteriological report at all in this year's statement of the work of the Local Government Board. We find absolutely no bacteriological data or references, and in the first paragraph of his report to Mr. Chaplin, Sir Edward Frankland simply states: "I have to report to you the results of the chemical analysis and of the physical examination of the water supplied by the eight metropolitan water companies and the Colne Valley Company during the year 1897." Putting aside any conjecture as to why a bacteriological examination was not conducted this year —or, at any rate, if it was it is not reported in the Blue-book— we are at a loss to understand why Major-General Scott points to a report which does not exist in official print. Sir Edward Frankland's report is again almost identical, word for word, with last year's report. The dates are of course different and some of the figures, but the interpretation is almost precisely the same, and last year's paragraphs have in a large measure served for the purposes of the present report. It will be remembered that two years ago the chemists to the London County Council reported that they had found suspended matter in the London water-supply which forced the conclusion that the filters were inoperative as regards removing the suspended matter peculiar to raw river-water. This evidently prompted Sir Edward Frankland in his report for 1896 to take up the question, and he stated among other things his opinion that the presence of the bacillus coli communis in water was no proof of sewage contamination because this organism is one of the most ubiquitous and persistent of harmless microbes. Then he added some remarks on the occurrence of suspended matter—remarks which are repeated in exactly the same terms in the report just issued. We reproduce the last sentences because a year ago we considered them in the light of a rejoinder to the London County Council's report two years ago and they were couched in similarly popular language:—"The amount of this suspended matter in the efficiently filtered river-water supplied to the metropolis rarely if ever exceeds 0·0002 grain in a tumblerful, and therefore in order to imbibe a single grain it would be necessary for the consumer to drink no less than 5000 tumblerfuls of the water. Such excessively minute quantities of matter which is presumably harmless may safely be neglected; indeed, it is impossible practically to obtain water free from it." We think that this and other continual reiteration is likely to cast discredit on official reports. The remarks of Major-General Scott as to his examination of the water supplied by the several companies and as to the condition and degree of efficiency of the works for its purification practically coincide with the points raised in the previous report of 1896. These turn largely on the daily discharge of the rivers and the relative quantity of water withdrawn, on the employment of cisterns, the extension of constant supply, the question of waste, and lastly on the desirability of securing a connexion between the mains of one company and those of another. "Such interconnexion of the mains of the several companies has been effected to some extent but not so fully as is desirable." This remark in particular occurs in the report of 1896 as well as in the one before us. According to Sir Edward Frankland the quality of the water-supply is free from reproach and here again practically the same remarks are made as to the points brought out in the series of analytical tables.

CHEMICAL TRADE NUISANCES.

The supervision exercised by the Local Government Board staff of special inspectors in regard to the working of the Alkali, &c., Works Regulation Acts continues to be attended by good results. The chief inspector states that reviewing the industry as a whole he has every reason to be satisfied with the care displayed and the competency of management shown and that complaints of damage to crops in the neighbourhood of works have almost ceased. The increased employment of electrolysis for the production of chlorine from common salt appears to be reducing very materially the risk of chlorine escaping in the air. One cause of nuisance to residents in the neighbourhood of chemical works appears to be the method of concentrating and rectifying sulphuric acid. There is a difficulty attending the suppression of this nuisance, but the matter has engaged, and is still engaging, the serious attention of the special officials appointed to see that the provisions of the Alkali Act are carried out.

THE OUTBREAK OF TYPHOID FEVER IN BELFAST.

THE monthly meeting of the city corporation of Belfast was held on Oct. 1st, and, as anticipated, there was an interesting discussion on the health of the city arising principally out of the reports of the Town Improvement and Public Health Committees. The report presented by the medical superintendent of health (Dr. Whitaker) for the period between August 21st and Sept. 17th was as follows: The number of cases of zymotic disease notified was 1121 cases of typhoid fever, 254 of simple continued fever, 46 of scarlet fever, 32 of erysipelas, 27 of diphtheria, 8 of membranous croup, 7 of puerperal fever, and 1 case of typhus fever. In the four weeks ending Sept. 17th there were 878 births and 673 deaths, a natural increase of 205. There were 234 deaths from zymotic disease, 81 from phthisis, and 83 from diseases of the respiratory organs, making a total of 164 from these two latter causes. In the corresponding period of 1897 the deaths from zymotic disease were 154. The annual death-rate from all causes was 28·8 and the mortality from zymotic diseases was 10·0 per 1000. While the number of cases of typhoid fever notified as well as the deaths from that disease are more numerous than in the preceding month, it is satisfactory to find that for the week ending Sept. 24th the number of cases notified was 164, or less than one-half that existed in the last week of August. The improvement in the health of Belfast in respect of typhoid fever appears in all the dispensary districts. The epidemic apparently reached its acute stage in the last week of August, and since then its diminution has been gradual until now it is less than one-half it was at the period referred to. The Public Health Committee in their defence claim that the epidemic has been put down by the measures adopted by them. They say they appointed a sub-committee on Sept. 1st and that the notifications of typhoid fever for the week preceding the assumption of their duties were 333, while in the week ended Sept. 24th the number was reduced to 124. The measures adopted by the Public Health Committee were (1) the employment of all the experienced officers of the Health Department; (2) the provision of vessels in houses where typhoid fever was present for the reception of dejecta, and their

subsequent removal and disinfection; (3) the more liberal flushing of the drains (through the kindness of the water commissioners) with water containing disinfectants in solution; and (4) the employment of Dr. Lorrain Smith to test water-supplies, milk-supplies, and to examine soil gathered from the infected areas, and to find out, if possible, the cause of the outbreak. His report has not been received. It is only fair, we think, to the Public Health Committee to state these facts; whether they are right or warranted in drawing the conclusion that by these means they have brought about a diminution in the cases of typhoid fever from 280 cases per week for the four weeks ended Sept. 17th to 164 for the week ended Sept. 24th is very doubtful. The impression of many people is that the improvement does not by any means indicate that the conclusion of an epidemic is being reached, but rather that the normal state of things in Belfast is being resumed, which unfortunately shows that, owing to the soil being laden with the germs of typhoid fever, due to past insanitary defects, the disease is always present—is, in fact, endemic; and that the so-called epidemic of typhoid fever in Belfast has been simply a recrudescence (due to the dry warm weather) of the normal condition of typhoid fever in Belfast, which is endemic. This is the problem the Public Health Committee have to face, and it is very pleasant to find that certain steps were decided on at the corporation meeting on Oct. 1st in this direction. For it was passed, "That a systematic test of all the drains of the city be made and that the head officers of the Public Health and Improvement Committees report what additional officers are necessary for this purpose and that such officers be appointed and a weekly return of the drains so tested be made to the above committees." A leading member of the Public Health Committee in moving this resolution confirmed what has been stated by the special sanitary commissioner of THE LANCET. He said that the Improvement Committee had in the past allowed drains to be constructed of the most imperfect character. In some cases ordinary field drains had been laid down for the purpose of carrying sewage away, and in one district with which he was formerly well acquainted large numbers of people were living in houses to which there were no drains whatever except into the street, where they terminated, there being no connexion between the street drain and the main drain. The Improvement Committee has up to the present neglected one of the provisions of the Public Health Act, which decreed that no house should be allowed to be inhabited until it had been examined and a certificate given as to its sanitary condition by the borough surveyor. The Public Health Committee were receiving the blame for the present insanitary state of the city and for the prevalence of typhoid fever in their midst, but they were in this position—the sins of their fathers who were the members of that corporation thirty years ago were being visited upon the present Public Health Committee and the corporation in general. He believed that the epidemic of typhoid fever was probably due to defective sewers and to the fact that the soil was saturated with filthy matter which had been there from time immemorial. The result, he said, of an examination of Belfast water negatived the idea that the epidemic was caused by the water. These opinions of a prominent member of the Public Health Committee corroborate fully the views put forward in THE LANCET as to the typhoid fever in Belfast being not merely epidemic but really endemic. Another most important project sanctioned on Oct. 1st was the erection of refuse destructors for getting rid of 200,000 tons of dry house refuse collected annually. Some of this has in the past been removed as farm manure; a good deal of it, it is said, has been used as the horrible material to "fill up" grounds in various parts of the city. A committee has been investigating this matter, and the corporation have sanctioned tenders being issued for the erection of refuse-destructor plant at an estimated cost of £10,000. It is arranged that this plant shall be erected at the pumping station output works of the city main sewage, and that the destructors shall provide sufficient power to work the pumping machinery and an electric plant for the lighting of the station. The work is to be begun at once.

It is regrettable to find that an attack was made by some members of the corporation on the medical profession in reference to the duplicating of returns under the Notification of Infectious Diseases Act, but the good sense of the great bulk of the corporation asserted itself on behalf of the medical men and the majority refused to allow the City Council to be made a vehicle for an attack on our profession. There may have been mistakes made by medical men notifying infectious diseases, due in many cases to the way the Act is framed, but the general results of notification have not been vitiated by such slips; and it should also be remembered that last winter when such charges of errors in notification were first made the Western Medical Society sent a circular to each of its members drawing their attention to what had been said. It is pleasant to be able to report that the city corporation of Belfast, aroused at last by a determined public opinion and the medical press have begun to grapple with the insanitary state of that city due to the sins of the past. Full credit must be given for the two most necessary reforms which they initiated last week, but they must go a great deal further, until typhoid fever ceases to be endemic in their midst, and until they have removed the reproach hurled so often at the inhabitants of a modern city that its death-rate from a preventable disease like typhoid fever is the highest in the United Kingdom.

OPENING OF THE MEDICAL SCHOOLS.

Guy's Hospital.—In accordance with the usual custom the session was opened by a meeting of the Physical Society. This was preceded by a house dinner in the college at which Mr. Charters J. Symonds took the chair in the absence of Dr. P. H. Pye-Smith, the president of the Students' Club. Sir Samuel Wilks, Bart., Mr. H. Cosmo O. Bonsor, M.P., and many members of the staff and students were also present. The large company afterwards adjourned to the new physiological theatre, where, after a short address of welcome to the new students from Sir Samuel Wilks, Mr. W. H. Crosse, F.R.G.S., late principal medical officer to the Royal Niger Company, read a paper on the Treatment of Malaria and Blackwater Fever.

King's College Medical School and Hospital.—The beginning of the medical session was, as usual of late years, marked by the annual dinner of the old students and their friends, who met at Limmer's Hotel on Monday, Oct. 3rd. The chair was occupied by Mr. A. Boyce Barrow, and he was supported by a very large gathering, which included almost all the members of the staff and many others who had travelled great distances in order to be present. In proposing the toast of "The Navy, Army, and Reserve Forces," Mr. Barrow alluded to the recent Egyptian campaign, and to the excellent work which had been done by King's men in the Royal Army Medical Corps. His allusions to Colonel A. T. Sloggett, who was seriously wounded at Omdurman, to Captain G. A. Bray, and to Captain H. E. H. Smith were received with enthusiasm. Colonel R. H. Jelf, C.B., and Captain H. L. Hughes responded to this toast. The toast of the evening, "King's College Hospital and its Medical School," was proposed by the Chairman and responded to by the Rev. Dr. Robertson, Principal of King's College and by Mr. C. Awdry, treasurer of the hospital. The toast of "The Chairman" was proposed by Mr. Richardson Cross, High Sheriff of Bristol, and it was greeted with musical honours. In the course of the evening Mr. Percy Webster and Mr. Herbert Schartau gave a selection of songs which was much appreciated. The proceedings were brought to an harmonious conclusion with the singing of "Auld Lang Syne."

Middlesex Hospital.—The annual dinner of the past and present students was held on Oct. 3rd at the Café Royal. The Right Hon. Sir Ralph Thompson, K.C.B., presided and the attendance was exceptionally large. After the usual loyal and patriotic toasts Sir Ralph Thompson proposed the "Middlesex Hospital and Medical School." A review of the past year, he said, showed that the hospital and school had steadily pursued a career of usefulness and prosperity. In the near future its sphere of usefulness would be still further increased by the addition of the new cancer wing. Dr. Cayley, in responding, spoke of the training of students and said that the desire was to send forth men into the world as thoroughly equipped as possible for their struggle with disease. Dr. Pasteur, the Dean, spoke of the great advance made by the new buildings which would make the school one of the best in the metropolis. Mr. T. W. Nunn proposed the "Past and Present Students,"

and alluded to the success which seemed to attend Middlesex men in every corner of the globe. Mr. E. A. Fardon, in replying for the past students, pointed out that both past and present were always united as students of disease. He alluded in feeling terms to the many who had passed away. Mr. C. G. Pugh replied for the present students. Mr. Stephen Paget proposed "The Visitors" and warmly thanked Mr. Wilhelm Ganz for his kindness in providing such a delightful programme of music and to this toast Mr. Ganz made an appropriate reply. Mr. Pearce Gould proposed the health of the chairman and dwelt on the skill and courtesy with which Sir Ralph Thompson always managed the affairs of the hospital and school. An excellent programme of music was provided during the evening under the direction of Mr. Wilhelm Ganz.

St. Bartholomew's Hospital.—The opening of the present session was inaugurated by the usual dinner of old students, which was held in the great hall of the hospital on Oct. 4th. Sir William Turner was in the chair and was supported by Sir Trevor Lawrence, the treasurer of the hospital, Sir H. F. Norbury, K.C.B., the Director-General of the Medical Department of the Royal Navy, and Surgeon-General Jameson, C.B., the Director-General of the Royal Army Medical Corps, Surgeon-General Hooper, Professor Ray Lankester, the Master of the Society of Apothecaries, Mr. Trimmer, Professor Arthur Thomson (Oxford), and Professor MacAlister (Cambridge). Of members of the staff there were present Dr. Church, Dr. Gee, Sir Dyce Duckworth, Dr. Brunton, Dr. Norman Moore, Dr. Herringham, Dr. Ormerod, Dr. Champneys, Dr. Griffith, Sir Thomas Smith, Mr. Willett, Mr. Langton, Mr. Marsh, Mr. Butlin, Mr. Walsham, Mr. Bruce Clarke, and Mr. Bowlby. Altogether there sat down 129. There were only five toasts and at the conclusion of dinner everyone adjourned to the library for coffee and smoking.

St. George's Hospital.—The annual dinner was held at the Whitehall Rooms, Hôtel Métropole, on Saturday evening, Oct. 1st. Mr. Holmes, treasurer of, and consulting surgeon to, the hospital, was in the chair. Covers were laid for 124 guests, a number which included past and present students and a few visitors. The meeting was an eminently successful one. The toasts proposed were the following: "The Queen and the Royal Family," "The Medical School," "The Governors of St. George's Hospital," "The Orator of the Day" (Mr. G. R. Turner), "Past and Present Students," and "The Chairman." Songs were sung during the evening by Dr. Llewellyn Powell and Mr. Trevor.

St. Mary's Hospital.—The annual dinner of the past and present students and of the athletic clubs was held at the King's Hall, Holborn Restaurant, on Oct. 3rd, Mr. J. N. Moore, J.P., being in the chair. Amongst the 211 present were Sir William Broadbent, Bart., Dr. Cheadle, Mr. Owen, Mr. George P. Field (Dean), Dr. Lees, Mr. Herbert Page, Dr. Sidney Phillips, Dr. Handfield-Jones, Mr. Juler, Mr. Anderson Critchett, Dr. Waller, F.R.S., Mr. H. G. Plimmer, Mr. Pepper, Lord Granville Gordon, Dr. Danford Thomas, Colonel Belemore, Colonel Myers, Mr. W. H. Cundell, Mr. J. R. Walker, Dr. Franklin Parsons, Dr. Caley, Dr. Scanes Spicer, Dr. Gow, Mr. H. S. Collier, and Dr. Luff (Sub-Dean). The toast of the "Queen and Royal Family" having been duly honoured on the proposal of the Chairman, that of the "Services" was proposed by Mr. Havell and responded to by Fleet-Surgeon T. J. Preston, R.N., Lieutenant-Colonel A. B. Myers, and Captain Whitcombe respectively. The Chairman then proposed "St. Mary's Hospital." Dr. Cheadle, senior physician, made a spirited speech in reply and proposed "The Dean" (Mr. G. P. Field), to whom so much of the success of the school was due. Mr. Field replied and proposed "Past and Present," responded to by Mr. Noble Smith and Mr. C. W. Buckley respectively. Mr. Edmund Owen, senior surgeon, then proposed "Athletics," to which Mr. J. E. Lane and Mr. A. G. Butler responded. "The Chairman" having been then proposed by Dr. Handfield-Jones the proceedings terminated with a short but enjoyable musical programme. A special feature of interest at the dinner was the presence of certain students specially invited by the School Committee as guests who had distinguished themselves during the past year in scholarship and athletics.

St. Thomas's Hospital.—The St. Thomas's Hospital Old Students' Annual Dinner took place on Oct. 3rd at the Whitehall Rooms of the Hôtel Métropole, Dr. Leonard W. Sedgwick being in the chair. The attendance was large and the dinner in every way was most successful. The chairman having proposed the toast of the "Queen and Royal Family," was followed by Sir William Mac Cormac, the President of the Royal College of Surgeons of England, who, in proposing the toast of "The Hospital and Medical School," gave some interesting reminiscences of the hospital as it was when he joined it twenty-five years ago. The treasurer, Mr. Wainwright, in response, commented on the thorough equipment of the hospital, and in thanking Sir William Mac Cormac for his appreciative remarks on the interest taken in the hospital by the Governors said that they had in view various schemes for still further improvement. Dr. Hawkins, the dean of the medical school, referred to the steadily increasing entries as an indication of the school's efficiency; the number of medals gained at London University and the very successful results at the College examinations also attested the same fact. He commented on the loss the hospital had sustained by Dr. Toller's appointment as physician to the hospital at Cairo. Mr. Mackellar also had resigned through ill-health. Dr. A. F. Stabb had been appointed assistant obstetric physician to St. George's Hospital. He also referred to the appointment of Dr. Perkins as fourth assistant physician. Dr. Bulstrode having spoken was followed by Dr. Crosby, who proposed the "Chairman." Dr. Sedgwick, in reply, spoke of the staff as it was when he joined the hospital fifty-three years ago, when Green, Grainger, and Marshall Hall were prominent figures. The toast of the "Secretaries" was proposed in a most amusing speech by the Rev. Dr. Merry and suitably responded to.

Westminster Hospital.—The annual dinner of the medical staff, members of the House Committee, past and present students of the school, and their friends was held on Oct. 3rd. The chair was taken by Sir George Scott Robertson, K.C.S.I., a former student and teacher in the school. A very pleasant evening was spent. After the usual loyal toasts those of the "Westminster Hospital Medical School," the "Old Students," the "Visitors," and the "Chairman" were duly honoured and replied to. Sir George Scott Robertson, in acknowledging the toast of his health, remarked that there was one thing which medical training did for a man. It taught him both to incur and face responsibility whenever it came upon him.

Medical Faculty of University College, London.—The annual dinner of the past and present students was held on Monday, Oct. 3rd, at the Hotel Cecil, Dr. Frederick Roberts being in the chair. About a hundred sat down. The chairman, in proposing the toast of the evening, "Success to University College and Hospital," referred to the many distinguished men who had been connected with the hospital, and mentioned that every London hospital, with the exception of Guy's, had an old University College student on its staff. Dr. Roberts, Dr. Beevor, and Dr. Philip Turner sang during the evening.

REPORT OF THE SANITARY COMMISSIONER WITH THE GOVERNMENT OF INDIA FOR THE YEAR 1896.[1]

SECOND NOTICE.[2]

THE most serious question which confronts the Government and the military authorities of India so far as the health of the European army is concerned is without doubt the great prevalence of venereal disease and of enteric fever in that country; the one gives rise to a large amount of present inefficiency followed by grave future consequences and the other to a long and severe illness and a very serious loss of life. While venereal diseases caused 37 per cent. of the total sickness enteric fever caused nearly 43 per cent. of the total deaths. As regards enteric fever the Sanitary Commissioner tells us that the differentiation of the bacillus and the treatment of the disease by enteric

[1] Annual Report of the Sanitary Commissioner with the Government of India, 1896, with Appendices and Returns of Sickness and Mortality among European Troops and Prisoners in India for the Year. Calcutta: Office of the Superintendent of Government Printing, India. 1898. Price, 5 rupees.

[2] The First Notice appeared in THE LANCET of Sept. 24th, 1898, p. 831.

serum, the diagnosis of the fever by the patient's serum-reaction to a true cultivation of the specific bacillus, preventive inoculation or vaccination, and the question as to how wide may be the dissemination of the enteric bacillus in nature continue to be the chief topics of interest. But first let us consider the prevalence of this disease in India. There were 1795 admissions from enteric fever with 445 deaths in 1896, against 1870 and 477 in the previous year, showing a slight decrease in the admission and death ratios per 1000 of strength in 1896. The average number of men constantly sick from enteric fever was 260, and the average duration of a case was 53 days (which does not of course show, however, that the men were fit for efficient service at the end of that time). The total loss to the service due to the disease was about 95,109 days. A table is given of the total fever mortality in the years 1895 and 1896 as compared with the two periods 1870–79 and 1881–90, which shows an increase of mortality from enteric fever and a decrease in mortality from other fevers in 1895 and 1896 as compared with the decennia.

These results are ascribed in the report under review, and probably quite rightly, to an increased susceptibility to enteric fever on the part of the army due to youth and recent arrival and partly to the increasing frequency with which the diagnosis of enteric fever has been made. Be the explanation what it may, however, a glance at the table shows that a progressively grave increase in the amount of fatal cases of enteric fever in India has been taking place. Turning to the section on the native army of India we find that the ratios for European troops in this respect are very unlike those for native troops and prisoners:—

	1886–95.		1896.	
	Admissions.	Deaths.	Admissions.	Deaths.
European troops ...	19·6	5·28	25·5	6·31
Native troops	0·2	0·08	0·1	0·04
Jail population ...	0·3	0·12	0·2	0·06

It must be borne in mind that nearly every fatal case of disease in the jail population is subjected to post-mortem examination and, as has been so frequently pointed out in these reports, the fact that the ratios of prisoners and native soldiers are almost identical leaves little or no doubt on one subject—namely, that the amount of enteric fever among our European troops serving in India is altogether out of proportion to that in the native troops and the jail population. Moreover, the total fever mortality in the two armies—European and native—is not the same in amount, which is strongly corroborative of the view that the difference is real and not a mere matter of diagnosis. Among European troops enteric fever stands at 42·5 in the percentage of deaths from all causes, whereas among native troops it is represented by 0·4. It is frequently alleged that the natives of India nevertheless suffer from enteric fever to an unsuspected extent, but that they pay their tribute to that disease in infancy or early life and acquire immunity thereby from subsequent attacks. It may be so, but the assertion rests rather upon conjecture than upon any scientific basis or actual observation, for it has never been proved. It is possible, of course, that the continued exposure of the natives of India from earliest life upwards to the causes of enteric fever and an insanitary environment may tend to make them immune; that is also a plausible but unproved explanation. Still the fact remains that the relative insusceptibility of the native as compared with the European to enteric fever seems to be established, and we suspect that a difference of diet—the native's abstinence from meat and alcohol—may have some influence in this respect in a hot climate like that of the plains of India. Be this as it may, a great deal still remains to be done in the way of the scientific differentiation of the fevers of India. That typhoid fever largely prevails there cannot be doubted; the fever has all the clinical features, and when fatal all the special anatomical lesions, which characterise typhoid fever elsewhere. But there are some observers who are not yet convinced that every case of fever in India attended with ulcerative disease of the glands of the small intestine is absolutely identifiable with the typhoid fever of other climates and attributable to the same causes—the typhoid bacillus of Eberth and Gaffky, the life history and dissemination of which in nature has still to be thoroughly worked out. It is often urged, and undoubtedly with much force and justice, that soldiers do not get enteric fever in barracks, but in the native bazars and from the drinks they obtain there; but young officers do not commonly have recourse to native drinks or native bazars, and yet they are notoriously very liable to contract and to die from enteric fever. A great deal has been done of late to advance our knowledge of this fever, but the difficulties which have to be overcome in prosecuting our inquiries in India are both very numerous and great. The reports of the Sanitary Commissioner are calculated to do much good in this direction. Meanwhile enteric fever is a terrible scourge in India, which country we are compelled to be periodically supplying with a highly susceptible material in order to maintain the strength of the British Army serving there.

With regard to two fatal cases of enteric fever may be mentioned the existence of a single abscess of the liver in one case and of multiple abscesses in the other. The fact is somewhat interesting, because looking to the causal connexion between dysenteric ulceration and hepatic suppuration it has often been asked why abscess of the liver should not be more frequently seen in cases of typhoid fever. This brings us to the subject of hepatic abscess. Speaking generally, dysentery and hepatic abscess march together; groups of stations and districts which have a high admission rate from dysentery have also a high rate from abscess of the liver, but they are nevertheless not exactly conterminous with one another. The natives of India suffer very much from dysentery but rarely from hepatic abscess, nor is the latter disease a common sequence of dysentery in other countries where dysentery prevails. It is said that the Spanish troops in Manilla and Cuba suffered much from dysentery but not commonly from hepatic suppuration. Hepatic abscess is more frequently met with in the Madras than in the other presidencies of India. Of the cases of abscess of the liver in the army in India 34 per cent. were returned as having been associated with dysentery, or 52 cases out of 153. It used to be assumed that where an abscess of the liver was not associated with dysentery or a history of that disease the abscess was almost always single, whereas when hepatic suppuration was so associated that there were multiple abscesses. The bearing of this on prognosis is obvious, especially in the case of surgical operation being had recourse to; but the figures in the sanitary officer's report do not bear out this view. It cannot as a matter of fact be said that dysentery invariably or even commonly gives rise to multiple hepatic abscesses and not to a liver abscess.

THE SANITARY INSTITUTE: MEETING AT BIRMINGHAM.

(Concluded from page 896.)

Food Preservatives.

IN the section of Sanitary Science and Preventive Medicine Dr. ALFRED HILL, the President, dealt in his address with the question of food preservatives. In his opinion the use of chemical preservatives ought to be prohibited altogether. They enabled foods to be sold as fresh which were stale and which had undergone such putrefactive changes as to make them frequently harmful and sometimes actually poisonous. One of the difficulties in the way of putting down the use of preservatives was the different ways in which it was regarded by the justices in adjudicating on these cases. All additions to food the influence of which on health was doubtful ought to be prohibited and their use supplanted by refrigeration. A resolution was agreed to recommending the Sanitary Institute to present a memorial to the proper authorities calling attention to the recommendation of the Food Products Commission and urging that investigations by recognised scientific authorities into the effect of preservatives upon health be forthwith set on foot and that a court of reference be established.

The Birth-rate.

Dr. DAWSON WILLIAMS took for his subject "The Decline in the Birth-rate." He pointed out that when the census was taken in 1891 it was discovered that we had been making

an over-estimation of our population in England and Wales, and that whereas the estimate expected an increase since 1881 in round numbers of 3,750,000, the actual increase as ascertained by enumeration was only just over 3,000,000. The growth of a population was determined by the balance between births and deaths and the balance between immigration and emigration. The decline in our rate of growth had been due to a disturbance of both these factors. The births were 290,000 below expectation and emigration was 412,000 above expectation. The death-rate was lower, so that, in fact, the natural increase on balance of births and deaths ought to have been larger. He ascribed the diminished birth-rate to a progressive decrease in the number of children born to married English and Welsh women, and mentioned as a curious fact that the proportion of bachelors in a given number of males decreased steadily, not only during early adult life and maturity, but afterwards also. There were more infants born in towns than in the country in proportion to the population; but the infant mortality in the towns was so much higher than in the country that the town excess of births failed to maintain an excess in proportion to the total population.

The Progress of Sanitary Science.

Dr. G. SIMS WOODHEAD, President of the Physics, Chemistry, and Biology section, delivered an address in which he passed in review some of the more important advances which had been made in sanitary science in recent years. Twenty years ago, he said, tuberculosis was looked upon as a disease with which it was almost hopeless to contend with any great prospect of ultimate success—a conviction which was only now being gradually eradicated from the lay mind. With regard to diphtheria the outlook was equally gloomy up to five years ago. The spread of the knowledge of the laws of health amongst medical men, amongst corporate bodies, public societies, and individual laymen had, during the last few decades, done something to illumine a very great darkness, and tuberculosis and diphtheria were being systematically sapped and mined by most earnest workers.

The Pollution of Streams and Rivers.

Dr. CHRISTOPHER CHILDS said the evil of pollution had existed from time immemorial and it was admitted that the Rivers Pollution Act of 1876 had generally and persistently failed in the purpose for which it was intended. The chief difficulties in the way of the much-desired reforms were the ignorance and indifference of the people, the great cost of sewage purification, and the uncertainty with regard to the best means to be employed, the defects in the law itself, and the impotence of the measures provided for its administration. We could not, however, hope for thorough and effective legislation until the people had been roused from this indifference—until they were made fully conscious of the disgusting contamination to which their water-supplies were so commonly liable, until they were convinced of the consequent danger to which they were so constantly exposed, and until they insisted upon those reforms which would afford them reasonable protection.

Hospital Reform from a Sanitary Point of View.

Mr. T. GARRETT HORDER, honorary secretary of the Hospital Reform Association, read a paper on this subject, placing before his hearers the proposition that the aggregation of large numbers of sick people in the out-patient departments of our hospitals and infirmaries is detrimental to the well-being of the patients, is unnecessary, and is likely to cause the spread of infectious disorders. After describing the usual waiting-room of a large city hospital, in which men, women, and children suffering more or less from every conceivable disease congregate, mixed indiscriminately together, patiently waiting their turn to be called before the physicians and surgeons in attendance, he put the question, Can the waiting-room attendants be expected to distinguish between infectious and non-infectious cases? In the Clinical Hospital, Manchester, in 1895, Mr. Horder said, the following cases were treated in the out-patient department: measles, 8; whooping-cough, 9; chicken-pox, 6; enteric fever, 2; erysipelas, 2; pediculi, 40; and scabies, 50. In the Liverpool Infirmary for Children in 1896 the following cases were treated in the out-patient department: typhoid fever, 9; scarlet fever, 15; measles, 7; whooping-cough, 55; chicken-pox, 32; mumps, 17; diphtheria, 17; pediculi, 47; and scabies, 32. It might therefore be assumed that a similar condition of things occurs in the majority of the out-patient departments.

Infected Milk.

Dr. SCURFIELD (Sunderland) dealt with this question, remarking that it seemed very desirable that the Somerset House analytical authorities should adopt a higher standard for genuine milk, as there could be no doubt that the present low standard of 2·75 per cent. for fat and 8·5 per cent. for non-fatty solids allowed a large amount of adulteration to go on unchecked.

Tuberculous Meat.

Dr. JAMES NIVEN (Manchester) said that from careful inquiries which he had made he was able to show that the rule might be broadly laid down that healthy people did not contract phthisis except on prolonged and intimate exposure to sources of infection. The amount of meat actually containing tuberculous infective matter was, he believed, understated, but definite information could be obtained with regard to milk. A resolution was agreed to that all public institutions, hospitals, asylums, and public services ought to obtain milk from herds guaranteed free from tuberculosis by a competent veterinary surgeon, and that a Bill should be introduced at the earliest possible date for giving effect to the recommendations of the Commission.

The proceedings of the annual meeting were concluded with a popular lecture delivered by Dr. ALEX. HILL, Vice-Chancellor of Cambridge University, upon Unnatural Death. It was not the dangers of railway travelling or the few murders that occurred which brought down the average longevity of human life from 100 years to 50, he said. Something more subtle and murderous than that must be sought for. Every year 900,000 babies were born in England and Wales. If we took 1,000,000 children and saw what was likely to be the end of them we should find that 30,000 would die a violent death by accident, about 120,000 would succumb to the mysterious disease which we know now to be absolutely preventable—phthisis in its many forms—and only 45,000 would be allowed to live out their natural lives. One-quarter of all the diseases which destroyed life were absolutely preventable. If the practice of hygiene were only on a level with its theory the average longevity would be raised at once from fifty to sixty-five years. It was desirable that every citizen should have the same exact knowledge of the causes and properties of preventable diseases that the medical officer himself had.

"CONSCIENTIOUS OBJECTION" TO VACCINATION.—At the Cardiff Police-court on Sept. 24th a young man was granted a certificate of exemption on the ground of conscientious objection to the vaccination of his child. Dr. J. Mullin, who was one of the presiding magistrates, said that he took that opportunity of stating that they as magistrates had "conscientious objections" to the granting of these certificates. He added that the magistrates had a conscientious belief that the law permitted an act of gross injustice to the child, and they regarded the conscience clause as a great farce which would one day end in a tragedy and then they would hear no more about this conscience clause.

MEDICO-PSYCHOLOGICAL ASSOCIATION.—A meeting of the Northern and Midland Division of this association will be held at the Derby County Asylum, Mickleover, near Derby, on Oct. 12th. A paper will be read by Dr. James Middlemass of the Sunderland Borough Asylum on the Treatment of Insanity by Thyroid Extract. An omnibus will leave the Midland Station, Derby, at 12 o'clock, reaching the asylum (five miles distant) in time for lunch, and Dr. Legge will provide lunch for members at 1 P.M. After the meeting members will be shown through the asylum by the medical officers. Dinner will be served at the Midland Hotel, Derby, at 8 P.M. Morning dress. Price 5*s*., exclusive of wines.—The autumn meeting of the South-western Division of this association will be held at the Grand Pump Room Hotel, Bath, on Wednesday, Oct. 19th, at 2.45 P.M. After the business meeting there will be a discussion on Dr. Blachford's paper read at the last meeting; Dr. Bristowe will read a paper on Lunacy in Private Practice; and Dr. Weatherly will contribute a paper on Lunacy and the Public. Dinner will be supplied at the Grand Pump Room Hotel at 5.30 for 6 P.M.

THE THOMPSON-YATES LABORATORIES OF PHYSIOLOGY AND PATHOLOGY IN UNIVERSITY COLLEGE, LIVERPOOL.

FIG. 1.

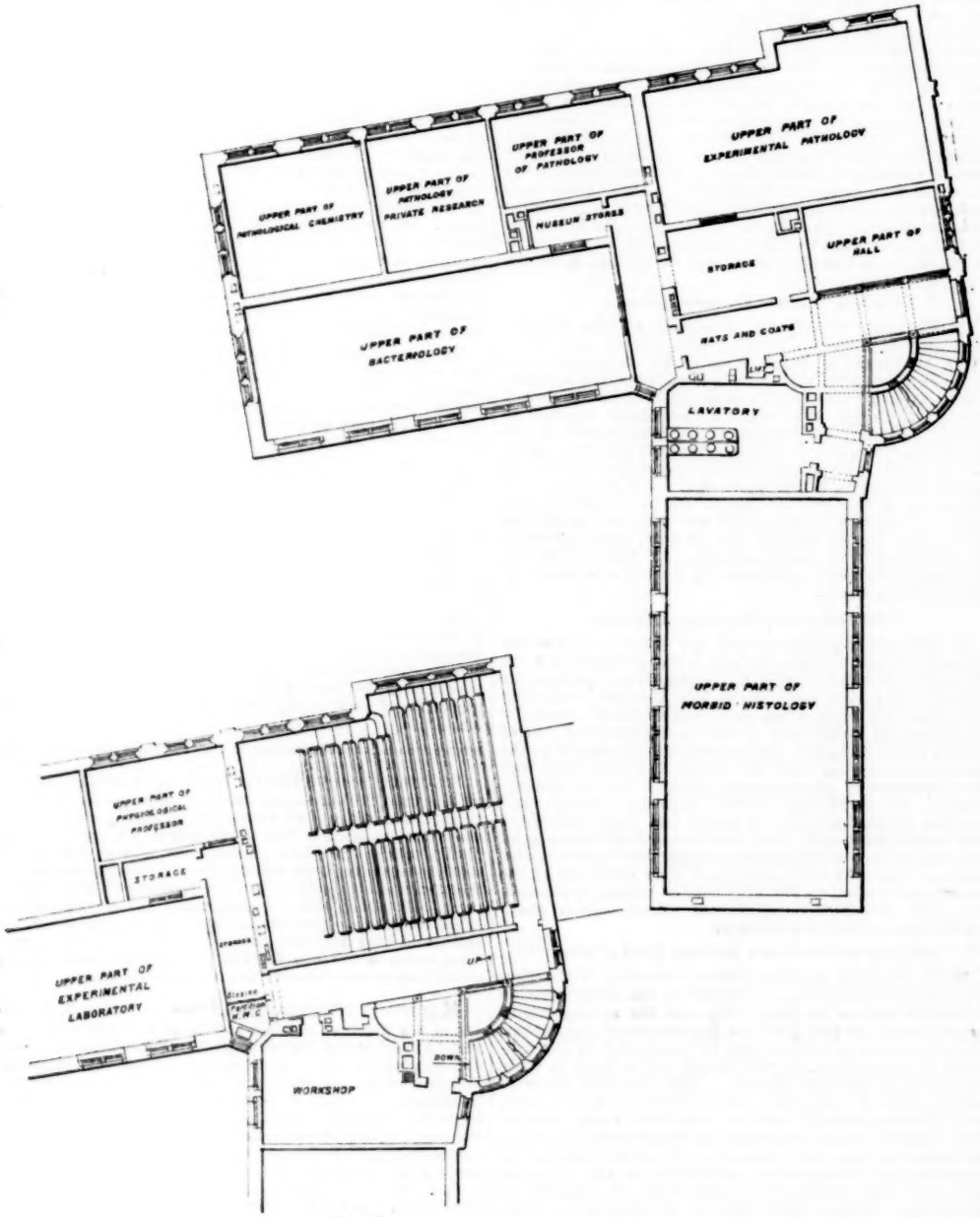

FIG. 2.

Fig. 1, plan of the floor between the ground and first floors; Fig. 2, plan of the floor between the first and second floors.

OUR Liverpool correspondent described last week at some length the noble gift which the Rev. S. A. Thompson-Yates has made to University College, Liverpool. We give above diagrams of two of the floor from which our readers can comprehend something of the completeness of the accommodation which is now offered to student and teacher alike in physiology and pathology at Liverpool. The laboratories will be opened to-day, Saturday, Oct. 8th, by Lord Lister.

COMPLIMENTARY DINNER TO PROFESSOR VIRCHOW.

A LARGE and representative gathering of members of the medical profession of Great Britain and Ireland assembled in the reception-room at the Hôtel Métropole on Wednesday, Oct. 5th, to receive their distinguished colleague, Professor Virchow. The following is a list of those present:—Lord Lister, who subsequently presided, Sir Samuel Wilks, Sir William Mac Cormac, Sir William Turner, Sir William Broadbent, Sir John Williams, Professor Chiene, Sir Henry Norbury, Surgeon-General Jameson, Sir Trevor Lawrence, Sir Henry Thompson, Sir William Roberts, Sir Thomas Smith, Dr. Hare, Mr. Timothy Holmes, Dr. Lionel Beale, Dr. Watt Black, Dr. Pavy, Dr. Saundby, Sir Douglas Powell, Sir William Gairdner, Sir William Gowers, Sir Dyce Duckworth, Sir Robert Craven, Mr. Hutchinson, Dr. W. H. Dickinson, Dr. Robert Barnes, Dr. Bastian, Dr. Herman Weber, Dr. Lauder Brunton, Dr. Sansom, Dr. Crookshank, Dr. Althaus, Dr. Dawson Williams, Dr. Luff, Professor Kanthack, Mr. D'Arcy Power, Dr. Holman, Mr. Shirley Murphy, Dr. Glover, Dr. Coupland, Dr. Buzzard, Mr. Watson Cheyne, Mr. Malcolm Morris, Mr. Brudenell Carter, Dr. Ferrier, Dr. Poore, Dr. Radcliffe Crocker, Dr. Sims Woodhead, Mr. T. W. Nunn, Mr. Macready, Mr. Noble Smith, Dr. Ferguson, Dr. Meek, Dr. Dupont, Dr. Leeson, Dr. Allison, Dr. H. Williams, Dr. R. Jones, Dr. Abraham, Dr. Percy Smith, Dr. Dakin, Dr. Newton Pitt, Major McLaughlin, R.A.M.C., Dr. A. Jamison, Dr. E. H. Williams, Mr. Robert Jones, Mr. Ernest Clarke, Dr. L. M. Griffiths, Dr. P. Horrocks, Dr. Galloway, Dr. W. Hill, Mr. Ernest Lane, Mr. Howard Marsh, Mr. Cowell, Dr. Ewart, Dr. John Anderson, Dr. Habershon, Mr. James Berry, Mr. Swinford Edwards, Mr. M. Ling, Dr. Scanes Spicer, Dr. Haydn Brown, Mr. Work Dodd, Mr. H. J. Curtis, Dr. Wynter, Mr. W. T. Lister, Mr. Spokes, Dr. A. G. Phear, Dr. Hunter, Dr. G. F. Blacker, Mr. L. Cheatle, Dr. V. Harris, Mr. R. Johnson, Dr. Washbourn, Dr. G. Murray, Mr. H. G. Plimmer, Dr. C. J. Arkle, Dr. Bradford, Professor Ray Lankester, Mr. Owen Lankester, Mr. Bowlby, Mr. Fripp, Dr. James Taylor, Mr. Walsham, Dr. S. West, Dr. Sainsbury, Mr. G. Barling, Mr. B. Pollard, Dr. Mott, Dr. Spencer, Dr. Pye-Smith, Mr. W. Anderson, Dr. T. Williams, Dr. G. Fletcher, Mr. Crichett, Mr. Field, Dr. Ogilvie, Dr. Briscoe, Dr. R. W. Burnet, Dr. Chapman, Dr. Nix, Dr. Slimon, Mr. Andrew Clark, Mr. Pickering Pick, Mr. Willett, Dr. E. Seaton, Dr. Caton, Mr. R. Harrison, Dr. Bowles, Mr. Butlin, Dr. Goodhart, Dr. S. Mackenzie, Mr. Page, Mr. Tweedy, Dr. F. T. Roberts, Dr. Oliver, Dr. Allchin, Professor Corfield, Mr. W. H. Bennett, Surgeon-General Hooper, Dr. Biss, Dr. Gibbons, Dr. E. H. Hare, Dr. Abercrombie, Mr. Adams Frost, Mr. Gould, Mr. G. H. Makins, Dr. T. H. Green, Dr. Dreschfeld, Dr. Payne, Dr. Charlewood Turner, Dr. Haviland Hall, Dr. Sharkey, Mr. Barker, Mr. H. P. Symonds, Sir Hugh Beevor, Dr. W. R. Smith, Dr. Shingleton Smith, Dr. McCall Anderson, Dr. Whipham, Dr. Champneys, Dr. Eastes, Dr. Charters Symonds, Sir Felix Semon, Dr. Church, Mr. Croft, Mr. Langton, Dr. Eustace Smith, Mr. Howse, Dr. Gee, Mr. Alfred Cooper, Mr. C. Stonham, Dr. Owen Fowler, Dr. Voelcker, Dr. Penrose, Mr. J. H. Morgan, Mr. W. Braine, Mr. Michels, Dr. Chavasse, Mr. Freyer, Dr. O'Brien, Mr. Mirhead Little, Dr. Kingston Fowler, Mr. Waterhouse, Dr. Brockman, Mr. Bidwell, Mr. H. B. Robinson, Dr. Griffiths, Mr. Arbuthnot Lane, Mr. F. Durham, Dr. Perry, Dr. Herringham, Dr. C. Beale, Mr. J. Griffiths, Dr. T. R. Cross, Mr. Storer Bennett, Mr. B. Roth, Dr. Angell, Dr. W. A. Davies, Dr. T. Duka, Dr. C. Godson, Mr. Nettleship, Dr. Cheadle, Mr. Clutton, Dr. Acland, Dr. Leech, Dr. Mitchell Bruce, Mr. Godlee, Mr. S. Boyd, Dr. Pasteur, Dr. Beevor, Dr. V. Voss, and Dr. Montague Murray.

During the evening an anonymous telegram was handed to Professor Virchow, containing the following words: "Get thee hence, vile vivisector! England spurns thee!"

The toast of "The Queen" having been duly honoured,

Sir WILLIAM BROADBENT proposed the toast of "The Naval and Military Medical Services." The wording of this toast, he said, showed an important deviation from the toast recorded on the toast list. It was the first time that the medical departments of the two Services had been recognised by a special toast. Even at medical dinners the toast had usually been "The Navy and the Army," and the medical departments had been dragged in apologetically. He was glad to see a departure from this custom because the medical departments of the two great Services were well worthy of a special toast when the dinners were so pre-eminently, if not exclusively, medical. As medical men they were proud of the medical departments of the Navy and the Army, and he thought the prominence given to this toast was propitious. There was a growing recognition of the importance of the medical services in the conduct of campaigns. Campaigns had been ruined for want of medical knowledge and professional skill, but in our latest campaigns—in central Africa, in the wilds of Afghanistan, and more particularly in the last brilliant campaign—the medical department had shone conspicuously. The medical department of the navy was universally recognised as efficient, and a department which had given to the profession and to the world such men as Darwin and Huxley was well worthy of every recognition.

Sir HENRY NORBURY, Director-General of the Medical Department of the Royal Navy, in responding, said the navy as it existed to-day was never in a more efficient condition. He referred to the work which had been done by the bluejackets in recent engagements and concluded by remarking that the navy was worthy of the greatest confidence of the country.

Surgeon-General JAMESON, Director-General of the Army Medical Staff, in responding, said that it had been frequently said of late that the responsibilities of Her Majesty's army were ever increasing, and he could positively state that the responsibilities as far as his department was concerned were increasing in corresponding degree. Responsibility begot experience, and often we got experience through our own misfortunes and the misfortunes of others. Our good friends the Americans had just afforded us an object-lesson of how to improvise an efficient medical service from outside material. He did not assert that the task was impossible, because the Americans had performed it before. They succeeded in that task during the great War of Secession, but they did so after an expenditure of life and money unparalleled in the history of the world and after four years of bitter experience. Our estimates were framed on the assumption that success in battle was a certainty; but war was full of strange chances and the unexpected often happened. The work of the medical department during the late frontier war in India and Egypt was exceedingly good and in the case of the war on the Indian frontier there was not a case of septic disease from beginning to end. He need hardly state at that gathering that that result had been obtained only by following the principles laid down by the chairman, Lord Lister.

Lord LISTER, who read communcations of regret for unavoidable absence from Sir John Simon, Sir James Paget, and Sir Thomas Grainger Stewart, proposed the toast: "The Health of our Honoured and Beloved Master, Professor Virchow." Many of those present, he said, had had the advantage of his personal instruction; all might rank as his disciples, for the truths which he has enunciated have been studied and learnt by us all. Comparatively few in the present company recollected the effect which was produced by the first production of his *Cellularpathologie*, which swept away the false and barren theory of structureless *blastema* and established the doctrine that every morbid structure consists of cells which have been derived from pre-existing cells as a progeny. No part of the great discourse which they had heard two days ago was of deeper interest than Professor Virchow's observations which led him into the true path. Cellular pathology was now universally recognised as a truth. One portion of Virchow's doctrine had, indeed, required some modification—that portion in which he ascribes suppuration to proliferation of cellular elements. Certain collections, which we must admit to be of pus, were now known to be the result of the migration of leucocytes; but that all suppuration is produced in that way he did not himself believe. From his own investigations he came to the conclusion that there was a great deal more truth in Virchow's original view than has been generally assumed. Another kind of cellular pathology had come into existence in comparatively recent years—that abnormal conditions of tissues and functions were very often induced by the actions of parasitic cells, whether vegetable or animal, introduced from without. Those who heard the Huxley Lecture two days ago would know that Professor Virchow was thoroughly

alive to the progress of this new cellular parasitic pathology. In pathology Professor Virchow reigned supreme, but there were various other departments of human activity which he had made his own. No man was better versed in the history of medicine. He was an acknowledged authority in anthropology, a distinguished antiquarian, and a great politician. He did much to ameliorate the governmental conditions of his own country and later on in life his activity in the Reichsrath was so powerful that he became leader of the Opposition. One thing must be admitted by all—that Virchow's voice was ever heard in defence of liberty, truth, and righteousness. Lord Lister concluded by dwelling upon the large-hearted benevolence of Professor Virchow and his amiable character, which made him always ready to recognise work done by others, whosoever they might be. The toast was honoured with great enthusiasm.

Professor VIRCHOW responding said: The most kind and flattering words of your chairman have much surpassed not only my expectations, but my merits. I was prepared to find a friendly reception in your country, in which I have so often been hospitably received and where I always feel at home. I am no stranger amongst you. You all know that I have always been a friend of England. Even long before I had had the privilege of friendly relations with many of its best sons I had learned to admire the country and the people which, steadfast amongst the storms of the political movements of Europe, has preserved and developed the principles of civil and religious liberty—a glorious example for the whole of mankind. My inclination towards historical studies had made me familiar with the long roll of clever and successful investigators who had opened up to an unexpected degree the knowledge of nature in general and more particularly the knowledge of the nature and the internal processes of man. With respect and admiration I gazed at the work perfected by so many leading spirits. And then it was that I learned with delight how generously this people appreciates the work of foreign science, and how solid and lasting is the friendship accorded to those whom it considers to be its friends. Thus I have gladly accepted the invitation which has called me here now, and thus I feel again as if I were at home. Again I am under the hospitable roof of my old friend and pupil, Sir Felix Semon, who has so often been my guide and *fidus Achates* amongst you. Thus I see again the large number of distinguished men who are never tired of showing me that they are fond of me. Above all I wish to return my heartiest thanks to my venerable friend Sir James Paget, whom neither age nor infirmity prevented from calling on me. I salute with genuine emotion Lord Lister, whose immortal claims to glory outshine even his exalted position. I see around me the representatives and members of the oldest and greatest medical corporations of Great Britain, from whose works I have derived much instruction, much instigation to further labours. To-day, I think, I may say how much I have been touched by the confidence you have placed in me in choosing me to renew the remembrance of the great investigator whose commemoration we have just been celebrating. My task the other day demanded that I should demonstrate Huxley's influence upon the development of mental science. To-day I wish to emphasise that his merits in anthropological and ethnological respects are so great in the eyes of German *savants* that they alone would suffice to procure immortal reverence for his name. We shall not cease to follow in his footsteps and to defend the place which he has assigned to man in nature. Together with you we will try to clear up in every direction the biological history of man. May this task still further confirm and strengthen the solid union of English and German science. May the corporations of Great Britain and Ireland, which form the bulwark of medical science and practice that has remained unshaken for centuries, continue to give the world by teaching and example a guarantee that the results of our science may benefit mankind in an ever increasing degree. Before I sit down I ask you to drink with me to "The Health and the Prosperity of the Medical Corporations of Great Britain and Ireland," coupling with that toast the names of the Presidents of the Royal Colleges of Physicians and Surgeons, my old friends Sir Samuel Wilks and Sir William Mac Cormac, as well as of that distinguished representative of Scotch science Professor Chiene, the President of the Royal College of Surgeons of Edinburgh.

Sir SAMUEL WILKS, President of the Royal College of Physicians of London, said he claimed for the college which he represented a relationship with Professor Virchow, a distinguished Fellow of their body, the late Dr. Chance, having been the translator of the first English edition of Professor Virchow's chief work. Their guest belonged to no nation, time, or age. Pathology made the whole world kin. When English pathologists met men like Professor Virchow they felt that they were in sympathy with him, that their brains as it were were attuned to the same string. He remembered the time, now somewhere about forty years ago, when he was beginning to study the subjects which Professor Virchow had so advantageously taken up. He and his contemporaries were groping their way in the dark, when a light came upon them suddenly from afar—a light which illuminated everything and penetrated into the interior and gave them a new insight into physiology and pathology. Professor Virchow came to generalise like another Newton and gave them the *Principia* of medical science. If he might change the names he might say with Pope:—

> "Nature and Nature's laws lay hid in night:
> God said 'Let Virchow be!' and all was light."

Sir WILLIAM MAC CORMAC, President of the Royal College of Surgeons of England, said he was sure that everyone desired to do honour to such a man as their honoured guest and that he trusted that Professor Virchow would take back to his own country the belief that nothing which it was in their power to offer him was wanting. In Professor Virchow there was only one thing greater than the position which he held, and that was his modesty and his kindness.

Professor CHIENE, President of the Royal College of Surgeons of Edinburgh, who also responded to the toast, said that science knew no boundary, it recognised no nationality; its sphere was the universe, its object the good of humanity. In honouring Professor Virchow they were also honouring themselves.

Sir WILLIAM TURNER, President of the General Medical Council, proposed "The Health of the Chairman," and Lord LISTER briefly acknowledged the toast, concluding by handing Professor Virchow a book containing the names of all those present.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6652 births and 4695 deaths were registered during the week ending Oct. 1st. The annual rate of mortality in these towns, which had declined in the three preceding weeks from 24·6 to 23·6 per 1000, further fell last week to 21·8. In London the rate was 19·7 per 1000, while it averaged 23·3 in the thirty-two provincial towns. The lowest rates in these towns were 13·8 in Croydon, 15·5 in Cardiff, 16·4 in West Ham, and 16·5 in Leicester; the highest rates were 28·8 in Hull, 32·3 in Sunderland, 33·7 in Gateshead, and 35·5 in Salford. The 4695 deaths in the thirty-three towns last week included 1119 which were referred to the principal zymotic diseases, against 1546 and 1455 in the two preceding weeks; of these, 884 resulted from diarrhœa, 66 from whooping-cough, 60 from diphtheria, 53 from "fever" (principally enteric), 30 from measles, and 26 from scarlet fever. The lowest death-rates from these diseases were recorded in Croydon, Leicester, Halifax, and Birkenhead; and the highest rates in Norwich, Salford, Hull, and Gateshead. The greatest mortality from measles occurred in Norwich; from scarlet fever in Salford; from whooping-cough in Gateshead; from "fever" in Huddersfield, Bolton, and Birkenhead; and from diarrhœa in Norwich, Manchester, Salford, Hull, Sunderland, and Gateshead. The 60 deaths from diphtheria in the thirty-three towns included 33 in London, 6 in Swansea, 5 in Leeds, 3 in Birmingham, and 3 in Liverpool. No fatal case of small-pox was registered during the week under notice in any of the thirty-three large towns; and no small-pox patients were under treatment in any of the Metropolitan Asylum Hospitals on Saturday last (Oct. 1st). The number of scarlet fever patients in these hospitals and in the London Fever Hospital on the same date was 2459, against 2300, 2319, and 2353 at the end of the three preceding weeks; 300 new cases were admitted during the week, against 273, 243, and 288 in the

three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 135 and 157 in the two preceding weeks, further rose last week to 200, and were slightly above the corrected average. The causes of 48, or 1·0 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Nottingham, Bolton, Oldham, and in ten other smaller towns; the largest proportions of uncertified deaths were registered in Portsmouth, Birmingham, Liverpool, and Blackburn.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 18·8 and 19·7 per 1000 in the two preceding weeks, declined again to 19·1 during the week ending Oct 1st, and was 2·7 per 1000 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 15·7 in Leith and 17·6 in Glasgow to 25·5 in Greenock and 28·2 in Paisley. The 577 deaths in these towns included 75 which were referred to diarrhœa, 17 to whooping-cough, 14 to "fever," 11 to scarlet fever, 6 to measles, and 4 to diphtheria. In all, 127 deaths resulted from these principal zymotic diseases against 157 and 156 in the two preceding weeks. These 127 deaths were equal to an annual rate of 4·2 per 1000, which was 1·0 below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of diarrhœa, which had been 110 and 104 in the two preceding weeks, further declined to 75 last week, of which 32 occurred in Glasgow, 14 in Edinburgh, and 14 in Dundee. The 17 deaths from whooping-cough showed a decline of 5 from the number in the preceding week, and included 10 in Glasgow, and 4 in Edinburgh. The deaths referred to different forms of "fever" which had been 9 and 13 in the two preceding weeks, further rose to 14 last week, of which 6 occurred in Glasgow, and 5 in Paisley. The 11 fatal cases of scarlet fever also showed a further increase upon recent weekly numbers, and included 6 in Glasgow and 3 in Aberdeen. Of the 4 deaths from diphtheria 3 occurred in Edinburgh. The deaths referred to diseases of the respiratory organs in these towns, which had been 68 and 85 in the two preceding weeks, further rose to 87 last week, but were 50 below the number in the corresponding period of last year. The causes of 36, or more than 6 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had declined in the three preceding weeks from 30·7 to 27·0 per 1000, further fell to 24·6 during the week ending Oct. 1st. During the thirteen weeks of the quarter ending on Saturday last the death-rate in the city averaged 24·3 per 1000, the rate during the same period being 19·4 in London and 18·7 in Edinburgh. The 165 deaths registered in Dublin during the week under notice showed a decline of 16 from the number in the preceding week, and included 38 which were referred to the principal zymotic diseases, against 35 and 32 in the two preceding weeks; of these, 27 resulted from diarrhœa, 5 from whooping-cough, 5 from "fever," (principally enteric), 1 from scarlet-fever, and not one either from small-pox, measles, or diphtheria. These 38 deaths were equal to an annual rate of 5·7 per 1000, the zymotic death-rate during the same period being 3·9 both in London and in Edinburgh. The fatal cases of diarrhœa, which had declined from 38 to 20 in the three preceding weeks, rose again to 27 last week. The deaths referred to different forms of "fever," which had been 3 and 6 in the two preceding weeks, were 5 last week. The fatal cases of whooping-cough, which had been 4 in each of the two preceding weeks, rose again to 5 last week. The 165 deaths registered in Dublin last week included 42 of infants under one year of age, and 39 of persons aged upwards of sixty years; the deaths of infants showed a decline, while those of elderly persons exceeded the number recorded in the preceding week. Four inquest cases and 5 deaths from violence were registered; and 44, or more than a fourth, of the deaths occurred in public institutions. The causes of 13, or nearly 8 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are announced: — Staff Surgeon Ernest E. Bray to the *Dido*. Surgeon Shirley H. Birt to the *Icarus*, additional.

INDIA AND THE INDIAN MEDICAL SERVICES.

The services of Captain Green, Officiating Civil Surgeon of Howrah, are placed temporarily at the disposal of the Chairman of the Corporation of Calcutta. This cancels the notification placing the services of Captain Deare at the disposal of the Chairman. Captain Brown, Civil Surgeon of Purnea is appointed to act as Civil Surgeon of Howrah, during the absence on deputation of Lieutenant-Colonel Murray until further orders. Captain Vaughan, Deputy Sanitary Commissioner, Western Bengal Circle, is appointed to act as Civil Surgeon of Burdwan, during the absence on leave of Lieutenant-Colonel Gregg until further orders. Major J. Shearer, D.S.O., Bengal Establishment, 27th (Punjab) Regiment of Bengal Infantry, to be Secretary to the Principal Medical Officer, Her Majesty's Forces in India, *pro tem.*, vice Lieutenant-Colonel C. H. Beatson, whose tenure of appointment has expired. Major Moscardi Bellarmin Braganza (Bombay), 30th Regiment of Bombay Infantry (3rd Baluch Battalion), retires from the service.

VOLUNTEER CORPS.

Rifle: 1st (City of Bristol) Volunteer Battalion the Gloucestershire Regiment: Surgeon-Lieutenant J. Young to be Surgeon-Captain.

NATIONAL SOCIETY FOR AID TO THE SICK AND WOUNDED IN WAR.

The following is a letter dated from ss. *Mayflower*, Cairo, Sept. 18th, 1898, and addressed to the above society by Major W. A. Cowen, R.A.M.C.: "I beg to submit the following report *re* the trip of the National Aid Society's steamer *Mayflower* for the conveyance of sick and wounded from Assouan to Cairo. On Sept. 6th I took over medical charge of the ship, having under my command one medical officer, one serjeant, one corporal, and six privates of the Royal Army Medical Corps. The medical and surgical equipment was supplied from the military hospital at Cairo and proved adequate for the purpose. Three civil nurses were sent out from London by the society; they gave great satisfaction and were zealous in the performance of their duties. The sick and wounded received military rations for the journey, which were supplemented with the society's stores or substituted where necessary. The ship had accommodation for 52 men; double-berthed cabins on the upper deck to accommodate 30. On the lower deck the arrangement of the cabins has been altered, the partitions between the cabins being taken away and the berths arranged in two tiers, 12 on the starboard and 10 on the port side. This proved of great convenience, as it enabled stretchers to be taken inside the cabin and right up to the berth's side. All cases confined to bed, such as wounds of the leg and dysentery, were treated, as far as accommodation permitted, on the lower deck. Assouan was reached midday, Sept. 13th. At 10 A.M. on the 15th a sick convoy, consisting of 6 officers and 44 men, arrived by train from Shellal. The embarkment took place at once and within an hour the ship left for Cairo. Of the 6 officers 4 were wounded, 3 by bullets, 1 by a sword, while 2 were suffering from dysentery. Of the 44 men, 27 were wounded and 17 had dysentery and fever. The wounds consisted of bullet, sword, and spear, some of the men being wounded in two and three places. The great feature in the ship, in my opinion, is that wounds could be kept at physiological rest, this being conducive to treatment and comfort not to be obtained in a railway journey. Then, again, wounds could be, and were, dressed daily on strictly antiseptic principles, thereby minimising considerably deleterious after-effects. In conclusion, I beg to express the surprise and delight of both officers and men at the ship and its comforts provided for them, and which I feel sure will be most gratifying to the society. The ship arrived at Cairo on the afternoon of Sept. 18th, when the sick and wounded were conveyed by ambulance to the hospital." The following telegram has been received: "Society's hospital steamer *Mayflower* reached Cairo on Saturday evening, Oct. 1st, with the last of the wounded

from the battle of Omdurman—namely, 3 officers (Brinton, Nesham, and Nicholson), and 44 men; also 2 officers (Graham and Archer) and 2 men, sick, all benefited by the care bestowed upon them while on the steamer, which left on Sunday (Oct. 2nd) for Assouan to bring back the remainder of the sick from the front."

SURGEON-GENERAL CLEGHORN, C.S.I., I.M.S.

Although no official intimation had reached India up to the date of the reception of the last mail from that country it seems certain that Surgeon-General J. Cleghorn, M.D. St. And., C.S.I., the Director-General of the Indian Medical Service and Sanitary Commissioner with the Government of India, has announced his intention of retiring at the end of his furlough in this country. Surgeon-General Cleghorn, who has just been appointed honorary surgeon to the Queen, vice Deputy Surgeon-General S. B. Partridge, C.I.E., deceased, has had a long and distinguished career in India, where he will be much missed. He held the post of civil surgeon at Lucknow for a long time and, it will be remembered, was the delegate appointed to represent the Indian Empire at the Sanitary Convention at Geneva, where he did excellent service in connexion with the outbreak of plague in India. Surgeon-General R. Harvey, who has been filling the post of Director-General of the Indian Medical Service, and that of Sanitary Commissioner with the Government of India during the absence of Surgeon-General Cleghorn, will, no doubt, be confirmed in the appointment, and, from all that is known of him and of his eminent and varied services, he should prove a worthy and competent successor to and occupant of the post. Surgeon-General Churchill, R.A.M.C., officiating principal medical officer, Bengal command, has proceeded to England on three months' leave, Colonel Price, R.A.M.C., meanwhile officiating in his stead. It is understood that Surgeon-General Catherwood, R.A.M.C., now serving in this country, will be nominated to the post of principal medical officer of the Bengal command.

THE NILE EXPEDITION AND THE ROYAL ARMY MEDICAL CORPS.

A despatch has been received by the Secretary of State for War from the General Officer Commanding the Force in Egypt, Sir H. Kitchener, K.C.B. The following officers of the Royal Army Medical Corps are specially mentioned in the despatch: Lieutenant-Colonel A. T. Sloggett (wounded), Lieutenant-Colonel G. A. Hughes, Major C. A. Webb, Major G. Robinson, Major G. F. A. Smythe, Major D. Wardrop, Major R. W. Barnes, Major E. M. Wilson, Major A. Dodd, Major M. O'D. Braddell, Major C. R. Kilkelly, Major W. H. Pinches, Major H. M. Adamson, Major D. M. O'Callaghan, Major H. B. Mathias, Captain A. Y. Reily, Captain R. H. Penton, Captain H. E. Hill Smith, Captain C. S. Spong, Captain P. H. Whiston, Captain G. A. T. Bray, Captain J. W. Jennings, Captain H. N. Dunn, Lieutenant E. W. Bliss, and Lieutenant S. L. Cummins. In reference to Lieutenant-Colonel Sloggett an amusing story was related by Surgeon-General Jameson at the dinner to Professor Virchow on Wednesday evening last. Lieutenant-Colonel Sloggett was shot at Sir H. Kitchener's great battle, the bullet entering immediately above the left nipple. The ordinary aseptic dressing was applied and the wound healed in three days. When he reported himself to the Director-General in London, Surgeon-General Jameson asked him how it was that the bullet did not enter his heart, and remarked that Lieutenant-Colonel Sloggett ought to apologise for being alive. The latter replied that he thought his miraculous escape must be accounted for by the fact that his heart was in his boots at the time!

THE LATE SOUDAN CAMPAIGN.

The Sirdar evidently agrees with Marshal Saxe that an army marches on its belly, for he specially alludes in his late despatch to the excellent way in which the soldiers composing his force were rationed in the field and to the favourable effect this had in fortifying their health and strength. If an army is well fed and looked after, suitably clad and not habitually overworked, it is generally healthy, although it cannot, when the excitement of the struggle is over, be expected to escape altogether the sickness incidental to campaigning in a hot climate. As so frequently happens, no sooner is the nervous exertion and strain over than the troops begin to manifest and harvest the sickness they have contracted during active operations in the field. The latest advices from Cairo, however, state that the health of the troops has been much better than was expected. The death-rate from dysentery and enteric fever is lower than it was after the Dongola campaign.

THE MEDITERRANEAN SQUADRON.

We see by the papers that some dissatisfaction has been caused among naval medical officers serving with the Mediterranean fleet at the promulgation of an order that every ship is to have a surgeon on board at all hours of the day. We do not know, of course, what reasons the admiral may have had for this order, although he is quite within his power and rights to enforce it. The custom has hitherto been, where several ships were together, for a certain proportion of medical officers to remain on board their ships after working hours so as to be at once available if and when required. So far as we know this has hitherto worked very well. A rigid enforcement of the order that every ship is to have a medical officer always on board would practically make a prisoner of the medical officer where there happened to be only one on board a small ship; but there is probably some explanation forthcoming.

MAJOR MARCHAND'S MISSION.

It seems that Major Marchand's command at Fashoda is to be reinforced. At all events, the gallant adventurer is to have the services of another medical officer in addition to the Dr. Emily whose special promotion was recently mentioned in this column,[1] and doubtless the new candidate for Soudan distinction will not travel without an escort. According to a Ministerial order dated August 23rd, 1898, Dr. Ascornet, naval surgeon of the second class, has been struck off the strength of a marine battalion at Toulon in order that he might be "attached to the Marchand mission."

THE VOLUNTEER AMBULANCE SCHOOL OF INSTRUCTION.

The winter work of the school commenced on Monday, Oct. 3rd, when two large classes paraded for instruction under Brigade-Surgeon-Lieutenant-Colonel P. B. Giles, V.D., and Surgeon-Captain E. Ryan. Both classes were so well attended on the first night that the brigade-surgeon announced that no more men would be taken in either class after Monday, Oct. 10th. The officers' class recently held at the headquarters of the 1st Middlesex Rifle Volunteers has also been well attended and nearly 300 officers have now passed through the school.

THE LATE SPANISH-AMERICAN WAR.

The *Saturday Review* of Oct. 1st contains the first of what promises to prove an interesting series of articles on the above war by "an eye-witness." It is certainly lamentable to read of the state of things which apparently prevailed among the American troops. The writer says that the saddest instance of American official blundering was connected with the Army Medical Department, with which he proposes to deal in his article next week—the current number of the *Saturday Review*.

DEATHS IN THE SERVICES.

Brigade-Surgeon James Edward Tierney Aitchison, M.D. Edin., C.I.E., F.R.S., LL.D., Bengal Army (retired), on Sept. 30th, at his residence at Kew, in his fifty-fourth year. He entered the Bengal Medical Service in 1858 and served in the Afghan war of 1878.

It is announced that the tenure of appointment of the Directors-General of the Army Medical Department and the Army Veterinary Department shall in future be for five years unless the term is specially extended by the Secretary of State for War for a further period not exceeding two years.

In consequence of two officers of the Militia Medical Staff Corps having been seconded for service in the Niger Protectorate under the Foreign Office there are now vacancies for commissions.

Lieutenant-Colonel A. Kirwan, retired pay, R.A.M.C., has been appointed to the medical charge of the Leicestershire Regimental District.

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[1] THE LANCET, Sept. 17th, 1898, p. 778.

Correspondence.

"Audi alteram partem."

"THE PRACTICAL APPLICATION OF BACTERIOLOGY TO COMMERCE."

To the Editors of THE LANCET.

SIRS,—May I be allowed to add a footnote to the leading articles which appeared in THE LANCET of Oct. 1st? I have read with especial interest your remarks upon the practical application of bacteriology to commerce, as I have had occasion to follow the developments which have taken place in this branch of bacteriological investigation during the past few years. You have rightly emphasised the benefits which the labours of Pasteur have conferred on the industries of his country. This side of Pasteur's work has received too little attention in England though it has had more far-reaching effects than even his investigations upon disease. The impulse derived from the researches of Pasteur in this field has made itself but little felt amongst us if we take the achievements of foreign laboratories as a standard. I need only refer to Hansen's investigations which led to the introduction of pure yeast cultures and reduced brewing to an accurate scientific operation. The work also which is being carried on in Denmark and America upon dairy bacteriology is gradually placing the methods employed in the dairy on an accurate basis. In Germany the possible utilisation of bacteria in agriculture is receiving the closest attention, as well as the study of the living agents which play an active part in various fermentations—e.g., tanning, wine preparation, tobacco manufacture, &c. In this field of work we lag behind the continent and America. The methods practised on Lord Vernon's estate furnish an example of what must be done if our dairy produce is to be brought to the level of that of Denmark.

The laboratory of M. Duclaux at the Pasteur Institute, along with the instruction of M. Fernbach, is worthily upholding the Pasteur tradition and is yearly training a body of men to approach their work in a scientific spirit. M. Calmette at the Pasteur Institute of Lille, which I have visited, is carrying on the same work and is cordially supported by the municipality and the manufacturers of the district. M. Calmette's investigations upon snake venom are widely known, but fewer know of his investigations upon alcoholic fermentation, which promise to reduce distillation to a scientific method.

It may be of interest in this connexion to announce an important departure at the British Institute of Preventive Medicine. A large laboratory has been assigned to instruction and investigation in zymotechnical questions. In this laboratory it is hoped that the agriculturist, brewer, and chemist may find the instruction individually required for successfully employing the living agents of fermentation. Investigations will also be undertaken under competent direction, and it is hoped that when the department is fully organised many will be willing to avail themselves of its facilities and that it will become a centre of useful work on the lines you have indicated. The article upon a Central Bacteriological Laboratory for London has also a special interest for the British Institute of Preventive Medicine. This institute was amongst the first to undertake the examination of material on behalf of medical men and sanitary authorities and the requests for its aid have come from all parts of the United Kingdom. The institute is likewise doing similar work for important London districts—e.g., Marylebone, St. Pancras, Islington, Fulham, &c.—as well as conducting the systematic examination of water-supplies for a number of public bodies. The work is being done economically and with satisfaction to the various authorities concerned. The plea for a central laboratory for such investigations must appeal strongly to the community. At the same time, as you suggest, the need could be adequately and more economically met by utilising existing institutions. This institute was established by private enterprise to provide a national centre for bacteriological investigation and in its new home at Chelsea possesses a bacteriological department, a zymotechnical laboratory, research rooms, and a laboratory which it is desired to make a centre for investigations bearing on the public health. The question is a natural one: Why multiply new institutions if the work it is desired to do can be satisfactorily and economically carried out by those already in existence? The fees received would help to support a staff of men devoting their whole time to investigation and would be the means of increasing the output of valuable research work. I trust, having regard to the importance of the matters in question, you will allow me to take the opportunity of stating my views and of saying how heartily I endorse the suggestions you have made for the direction of this new movement. I am, Sirs, yours faithfully,

ALLAN MACFADYEN,
Director, British Institute of Preventive Medicine.
Grosvenor-road, London, S.W., Oct. 3rd, 1898.

"VITALITY."

To the Editors of THE LANCET.

SIRS,—In his letter published in THE LANCET of Sept. 10th Dr. Lionel Beale does not meet the objections I have advanced against his views on vitality. I ask, whence comes the augmentation in the sum of vitality possessed by an organism as it develops from a one-celled to a myriad-celled being, unless it be from the food and oxygen conveyed to it from without? For vitality, as Dr. Lionel Beale employs the term, is, I take it, a species of force, and force cannot be created out of nothing. Seeing, moreover, that force cannot be annihilated, what becomes of the vitality of an organism after death unless it be transmitted into some chemical, physical, or kindred force? But Dr. Beale would deny the possibility of such transmutation since he denies any correlation between vitality and the forces belonging to matter.

I contended that Dr. Lionel Beale is illogical in assuming that bioplasm is structureless, but my reason for this is not the one given by him. I say that in our journey into the world of the infinitesimal we, with our very limited means of investigation, come sooner or later to a point at which we cease to detect structure, but that this is a purely arbitrary point, that it merely marks the limit of our perceptions and *bears no relation whatever to any grand fact of nature.* Does Dr. Beale suggest that the nucleus of the ovum and spermatozoon that are destined to develop into a Newton or a Shakespeare cannot possess an elaborate structure simply because they appear so small to us? If he does I must repeat my assertion that his position is wholly illogical. The nucleus of the genital cell is no nearer the limit of smallness than it is to the limit of greatness, for we may go on dividing or doubling it *ad infinitum* without reaching the confines of the one or the other. We must not be hampered in our biological speculations by false conceptions of space. Bearing these considerations in mind Dr. Lionel Beale must of necessity admit that his bioplasm *may* be structural, and if he admits this he will more readily allow the possibility of "vitality being a peculiar play of forces belonging to the inorganic world," and depending upon the nature and arrangement of the atoms of bioplasm (= structure) and other purely physical conditions.

Dr. Lionel Beale asks what, on the assumption that "vitality is a peculiar play of forces belonging to the inanimate world," governs and controls these forces in living matter. I would reply that the behaviour of living matter depends upon the material conditions as represented by the living matter and its environment, just as the behaviour of a planetary system depends upon material conditions—upon the size and relative position of the worlds, &c., constituting it (= structure) and upon its relations to other systems (= environment). To call in a power, a governing, controlling, in short, an intelligent agency, which is quite distinct from the forces of the inanimate world, is but to deepen the mystery of life. Dr. Beale, instead of seeking to explain the behaviour of living matter by reference to known laws, postulates a power which is as great a mystery as the thing he seeks to explain by it.

I ought here to say that I used the term "spiritualist" not in the vulgar but in the modern psychological sense, as distinguished, namely, from "materialist." The former assumes that mind can act upon matter and the latter that matter can produce mind; and I compared Dr. Beale to the spiritualist in that he assumes that vitality is a controlling agency existing apart from matter, but yet capable of guiding its operations so that it shall *live.* By thus assuming that the immaterial can act on the material Dr. Beale takes up

a position which many great thinkers have regarded as untenable.

I am, Sirs, yours faithfully,

Wimpole-street, W., Sept. 26th, 1898. HARRY CAMPBELL.

CONSCIENTIOUS OBJECTION AT KEIGHLEY.

To the Editors of THE LANCET.

SIRS,—We have this week the first example of the wholesale working of the new Vaccination Act in an anti-vaccinationist community. Keighley has for more than twenty-five years been one of the strongholds of anti-vaccination. On Tuesday, Oct. 4th, 660 parents and guardians succeeded in gaining exemption for about 1670 children. At a similar court to be held on Oct. 18th no doubt a large number of additional exemptions will be granted. As the population of Keighley is about 35,000 it will be seen how large a proportion of the population has already exercised its right (granted by the wisdom of Parliament) to allow children to become potential dangers to public health.

Conscientious objectors forsooth! How were the proceedings carried out? The parents were brought into court in batches of from 10 to 20 at a time and asked whether they had conscientious objections. Some replied verbally, and in many cases a nod of the head was deemed sufficient proof of their deep-rooted convictions. A fee of 2*s.* was exacted in each case. With such rapidity were the proceedings carried out that in two courts the whole of the 1670 children were exempted in two hours and a half! A pure farce from beginning to end. It savours more of a Gilbert and Sullivan comic opera than the administration of laws of the realm. All these people and their children have now received the sanction of the Government to be a medium for the maintenance and diffusion of small-pox, whereas before the passing of the present Act they were tolerated by a negligent and apathetic board of guardians. One wonders how long the comedy will go on before it becomes a tragedy and wakens up the Government to a due sense of its responsibility. Should there be a serious outbreak of small-pox among these "conscientious objectors" the promoters and supporters of the exemption clause among the Government must consider that the responsibility lies at their door. If vaccination is of any use let it be absolutely compulsory, with imprisonment as punishment for non-compliance; if, on the other hand, it is useless, let it be voluntary.

I am, Sirs, yours faithfully,

Oct. 6th, 1898. CLEMENT ROGERSON, M.D. Lond.

"HOSPITAL REFORM ASSOCIATION."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Sept. 10th Mr. T. Garrett Horder, the hon. secretary of the Hospital Reform Association, solicits the opinion of your readers as to "whether it would be desirable and useful to hold a congress in London some time during the ensuing year to discuss the subject." I, for one, answer decidedly, Yes, and it is sincerely to be hoped that both the medical profession and the subscribers who should be so deeply interested in this important question will combine in making the meeting a success. I have been moving in this matter for the last few years and I feel convinced that we cannot too often draw the attention of the public to the increasing evil of hospital abuse.

I am, Sirs, your obedient servant,

Hove, Oct. 3rd, 1898. FRANCIS J. A. WARING.

RESONANT SPLEENS.

To the Editors of THE LANCET.

SIRS,—In his interesting case reported in THE LANCET of Oct. 1st, p. 866, Dr. J. Michell Clarke remarks that a "small area of tympanites beyond the stomach to the left over the tenth and the eleventh ribs was difficult to account for." The situation described and that depicted in Fig. 2 corresponds so exactly with the normal splenic surface area that in the absence of a reference to the presence of any splenic dulness the view might perhaps be entertained that the tympanitic note was due to the spleen. This suggestion is made on the strength of a series of observations in which the dulness of the spleen was converted into a boxy tympanitic resonance. The resonance referred to by Dr. Michell Clarke may have been brought about in an entirely different way; but the case reads as though it might illustrate a peculiarity which it may be sometimes useful to bear in mind at the bedside and to which reference has been made in a note on the Diagnostic Uses of Percussion of the Vertebral Spines,[1] and in a Lecture to Advanced Students on Pleximetry and on Pleximetric Bones and Viscera,[2] where the "boxy spleen" is further discussed.

I am, Sirs, yours faithfully,

Curzon-street, Mayfair, Oct. 3rd, 1898. WILLIAM EWART.

SPHINCTER STRETCHING IN CONSTIPATION.

To the Editors of THE LANCET.

SIRS,—The subjects of fissure *in ano* have usually suffered from prolonged constipation. This would seem to be permanently relieved by dilatation of the sphincter and that to an extent which is incompatible with the supposition that hygienic and drug treatment have been the only agents in causing success. The consideration of this fact has led me to employ sphincter stretching in several cases of intractable constipation in children with, so far, good results. I would suggest that there are two factors making for this result: (1) the destruction of what was mechanically a relative stricture; and (2) the presence of a nervous connexion between the anal orifice and the large bowel analogous to the so-called polarity of the uterus. I have been unable to give this method a trial in adults and should be glad to learn the experience of others in the matter.

I am, Sirs, yours faithfully,

SIDNEY VINES,
Assistant Resident Medical Officer, St. Mary's Children's Hospital, Plaistow, E.

Plaistow, E., Oct. 2nd, 1898.

SANITARY INSTITUTE CONGRESS.

To the Editors of THE LANCET.

SIRS,—The newspaper reports of the Congress at Birmingham are in error in attributing to me a motion regarding sanitary administration in Ireland. The motion was made by Mr. J. H. Fergusson, Killygordon, Donegal. Your insertion of this correction will oblige.

I am, Sirs, yours faithfully,

Glasgow, Oct. 3rd, 1898. JOHN C. MCVAIL.

THE LIMITS OF PROFESSIONAL SECRECY.

To the Editors of THE LANCET.

SIRS,—Some months ago I was called upon as a Poor-law medical officer to attend an unmarried woman suffering from septic metritis. I found the uterus to contain a decomposed fœtus. She absolutely refused to communicate her condition to anyone except a woman (a relation) in attendance. Her state was too serious to admit of delay and I could not refuse to attend her without divulging her condition to the board. I therefore procured the help of two colleagues, curetted the uterus, and returned the case as "septic metritis." In consequence of neighbourly gossip the guardians have now applied to me for information as to whether the late illness was produced by her own misconduct. I refuse all information as a violation of professional secrecy. Can you advise me if any conditions of relationship or employment warrant a medical attendant giving such information to any third person and if any statutory or common law protection against action is afforded to a Poor-law medical officer in such a case? Could I have acted otherwise in dealing with the matter?

I am, Sirs, yours faithfully,

Oct. 2nd, 1898. "JOHN DOE."

*** We consider that "John Doe" was quite right in not divulging the cause of the metritis. He is not a censor of morals as well as a Poor-law medical officer. If he makes the return asked for we doubt if he would be protected by "privilege." Probably a defence in a civil action of giving information "without malice" would be successful, but we

[1] THE LANCET, July 2nd, 1898, p. 23.
[2] Clinical Journal, July 13th, 1898.

advise him not to run the risk. If he is pressed for further information he should refer the matter to the Local Government Board and await events.—ED. L.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

The Progress of the Plague Epidemic.—Statistics of Inoculation.

THE heavy rainfall of the past week in Bombay city, amounting to over 20 in., has been accompanied by a slight decrease in the total mortality. The official returns, however, show 175 deaths from plague against 168 last week, and as the total mortality is above the average by considerably more than this number of plague deaths there is strong reason to suppose that many cases are recorded as due to other diseases. This especially applies to the Mohammedans, whose record of plague deaths is obviously incorrect. Registration is admittedly very faulty and the total number of weekly deaths is the only thing which can be relied on. It is unfortunately too plain that plague is again developing, although the successive increases each week have not been large.

In the Madras Presidency a few cases keep cropping up, but it has not yet been officially declared in the city. The excessively high rate of mortality is, however, very suggestive. Some disturbances have occurred at Bangalore, panic with regard to plague measures having seized the people, and troops have had to be called out.

In the Bombay Presidency 3637 cases and 2749 deaths were recorded against plague during the past week. The total mortality from plague since the commencement of the epidemic in September, 1896, is 105,512.

With regard to inoculation remarkable success is reported from Hubli. It is stated that no less than 32,000 people have gone through the process and that during the existing outbreak in that city only 69 of these have been attacked, while among the 8500 uninoculated there have been 417 attacks. If these figures be reliable they speak for themselves. In the district around, however, there has been a large number of deaths—the Dharwar district, in which Hubli is situated, being credited with 1047 cases and 892 deaths. To show how differently inoculation has been received at different places there remains only to compare Calcutta and Bombay, each with about 750,000 inhabitants and with about 2000 and 20,000 persons inoculated respectively, against Hubli, with a population of about 40,000 and no less than 32,000 inoculations. In Bombay there have been 27,305 deaths from plague and in Calcutta about 200. Amongst the inoculated in Bombay there were :—

		Population in 1891.
Brahmins	827	 37,962
Jains	132	 25,225
Hindus of other castes	2,331	 451,465
,, of low caste	2,434	 45,169
Mussulmans...	5,923	 155,101
Parsees	6,056	 47,458
Jews...	129	 5,021
Europeans	88	 11,290
Eurasians	27	 4,330
Native Christians	852	 29,712
Other nationalities	182	... ... —
Unclassed Hindus	573	... ... —
Total	19,554	Total... ... 812,753

Sept. 16th

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

The Birmingham Medical School.

THE present session was opened on the 3rd inst. at Mason University College, the inaugural address being delivered by Professor Michael Foster of Cambridge.[1] The dean of the medical faculty, Dr. Windle, presided and a large attendance included the Lord Mayor of Birmingham (Mr. C. Beale), several members of the council, a number of the professors, and others interested in the cause of medical progress. The address dealt with the rise of universities and guilds, their development, aims, and functions. A sketch was given of the proposed university for Birmingham, in which it was insisted that it should not be an educational institution directed by the principle of payment by results ; nor should it be a system of classes "which proposes at the least expenditure of time, money, and, it may be added, of brains to drive a head through the same narrow gateway of this or that formal examination." The encouragement of learning and research was indicated as the object to be kept in view—the spirit of inquiry, the guiding spirit. Some valuable hints and counsel as to the future were given and attentively listened to. The address was marked by a thoughtful accuracy of expression and intimate experience of the subject, the outcome of the wise and deliberate reflection of a master mind. We hope to see it in a permanent form, so that we may be enabled to dwell upon the eloquent truths it proclaimed. The prizes of the clinical board will be distributed by Sir William Mac Cormac on the 6th inst. at the General Hospital. The same evening Sir William Mac Cormac is to be entertained at dinner by the members of the Midland Medical Society, who celebrate their jubilee on this occasion. They look forward to the honour of having the learned President of the Royal College of Surgeons of England as their guest. The inaugural address of the same society will be given by Mr. Treves on the 20th inst.

Oct. 4th.

[1] See page 915 of this issue.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Insanitary Board Schools.

DR. WOODCOCK, who is a member of the Manchester School Board, did good service at the meeting of the board held on Sept. 20th by calling attention to serious sanitary deficiencies in several of their schools. The playground into which 198 boys are turned out for air and exercise at one school contains 180 square yards. At the same school 212 girls have to find space for fresh air and active games in 147 square yards. A sub-committee has recommended the increase of these "playgrounds" to 264½ and 239½ square yards respectively and it can be imagined how the children will revel in the sense of boundless space when these additions are made. In one class-room, 15 ft. 9 in. by 11 ft. 9 in., affording proper accommodation for 18 children, there were present when Dr. Woodcock visited it 50 children and their teacher, and in the boys' department he found 27 boys and their teacher in a room with proper accommodation for 18. At another school, in which the only ventilation is by open windows, the odours from a deposit of manure are wafted in from the confined space at the back of the buildings and this manure is stirred up for removal, it is said, three times a week. At St. Michael's Board School in Hulme, "the cellar communicating with the offices was occupied by 57 boys and 2 teachers. There were 5 gas-lights burning." The boys had to wear their caps as a protection against the draught from the open windows, through which the filth from the street "was freely blown." In an adjacent room he "found 30 boys and their teachers in a 'poisonous den'—a dark room below the level of the street, 16 ft. by 11 ft., and only 8 ft. high. There is not an inch of playground to this school." This state of things, of which examples could easily be multiplied, has not been suspected by the ratepayers of Manchester, and now that it has been at last revealed by a medical member of the board no doubt some energy will be displayed in removing evidences of—to say the least—gross disregard for the bodies, whatever may be the case as to the minds, of the poor children under the fostering care of the School Board. One of the older members of the board said, truly enough, that "the statement of Dr. Woodcock constituted a terrible indictment." Some people complain of lavish and unnecessary expenditure on the part of the School Board, but clearly there has been none too much done for the health of the children. More attention should be given to securing space and light, even if it should entail less expenditure on the costly decorative features so attractive to public-spirited members of "boards." It may be well, perhaps, if some candid friend will look to the sanitary conditions of the voluntary schools.

Typhoid Fever at Leigh.

A serious outbreak of typhoid fever has taken place at Leigh, near Manchester. Up to a few days ago 28 cases had been reported and several deaths had occurred. The Leigh District Council Health Committee are urging the Leigh Joint Hospital to complete their typhoid ward as quickly as possible. There is also a "rivers pollution" question in that neighbourhood, and the Hindley District Council have received 28 days' notice to stop the discharge of untreated sewage into the West Leigh brook under threat of legal proceedings. Whether this is connected with the outbreak does not appear, but striving for purity of streams is always good and increasingly important.

Poisoning from Bad Food.

Deaths from "bad food" have been unusually frequent during the hot period through which we have just passed. The city coroner held an inquiry on Sept. 22nd as to the death of a young fellow, aged eighteen years, who ate some pork for supper on the Monday and died on the Tuesday evening from gastro-enteritis. He was seized during the night with vomiting, diarrhœa, and cramp, and in the opinion of Dr. E. S. Reynolds, who made a post-mortem examination, "the pork said to have been eaten ..... on Monday evening might have set up the disease." The evidence of the person who is said to have sold the pork throws a little sidelight on food customs in the "slummy" parts of the city. The meat was bought on the Friday evening and kept on a stove in the back kitchen till Monday morning, when it was cooked. She "gave 2*s.* 3*d.* a dozen for it, which was a very good price." 2½*d.* a pound may have been a very good price for that special piece of pork, but most of us would look with suspicion on meat offered at such a "sacrifice."

"Carbolic Poisoning."

"Carbolic poisoning" is such a common newspaper heading that it is apt to pass unnoticed. The city coroner made some remarks on it, as he has frequent opportunities of doing, at an inquest on Sept. 23rd. The deceased and his wife for some time past had lived a miserable life and had drunk heavily; the latter came drunk to the court to give evidence which, however, was not taken. The man, forty-three years of age, goaded by drink and misery, bought sixpennyworth of carbolic acid, drank it, and threw away the bottle. He was taken to the infirmary, where he died. The coroner spoke of the frequency of this mode of suicide, which he could scarcely understand, seeing that it was like swallowing red-hot coals. The jury suggested that some restriction should be placed on the sale of carbolic acid, and he said "the legislature had no more contemplated that people would poison themselves in this way than that they would swallow live coals," but these cases were becoming so common that he thought its indiscriminate sale should be prevented. A cynic might perhaps say that the lives lost through carbolic acid are scarcely worth preserving, but that ought not to be the attitude of a "parental Government."

Vaccination: a Ray of Light.

At the meeting of the Salford Board of Guardians on Sept. 23rd permission was given to terminate the tenancy of certain vaccination stations on the introduction of home visits by the vaccination officers. One of the guardians distinguished himself by a prose pæan on the discomfiture of the vaccinationists. He congratulated the board that in the future they need not imprison people for not vaccinating their children. They never had done so and now there would be really no necessity for it—i.e., they never had done what there was a necessity for their doing. "The new law respected every man's conscience" (perhaps he should have said every man's ignorance and prejudice, as conscience has so very little to do with it) "as it ought to do, and he was glad they had got this ray of light in the nineteenth century." We cannot congratulate Salford on the possession of a guardian whose ray of light seems to be darkness.

Sept. 30th.

DEVONPORT WORKHOUSE.—On Sept. 30th the Devonport Board of Guardians discussed the alleged dark and insanitary condition of the punishment cells at the workhouse, and eventually it was decided to ask the Works Committee to effect certain improvements in them.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Vacant Professorship of Midwifery and Gynæcology in University College, Liverpool.

THE appointment by the Council of the Senatus Academicus to the professorship of midwifery and gynæcology in University College which became vacant by the demise of Dr. John Wallace on Sept. 1st is looked forward to with some interest. The candidates for the post are Dr. Henry Briggs, Dr. T. B. Grimsdale, Dr. Arthur Wallace (son of the late professor), and Dr. John E. Gemmell. All the four applicants are fully qualified for the office, but it is anticipated that the contest will lie between the first two candidates. As the winter session has already commenced the election will take place at an early date.

The West Derby Board of Guardians and the Treatment of Tuberculosis.

The West Derby Board of Guardians are taking an active interest in the question of the "open-air" treatment of tuberculosis. On the initiative of Mr. J. C. Bradshaw, the chairman of the Mill Road Infirmary, the board have addressed a communication to the medical officer of health of Liverpool, enclosing a copy of a report from Dr. Raw, the medical superintendent of the Mill Road Infirmary, on the open-air treatment of tuberculosis. The guardians, however, are not satisfied that the number of cases under treatment in their infirmary is sufficient to justify them in establishing a separate institution on the lines laid down by Dr. Raw, but they would be glad if Dr. Hope would lay the report before the health committee in the hope that the committee may consider the advisability of establishing a municipal institution for the out-door treatment of tuberculosis on similar lines.

The late Right Hon. Sir Arthur B. Forwood, Bart., M.P.

The late Sir A. B. Forwood, who was an alderman of the city council, took an active interest in local sanitary affairs and during his chairmanship of the health committee, a post filled by him for many years, he brought about many important improvements contributing to the health of the city in general. He was largely instrumental in retaining the Ladies' Charity and Lying-in Hospital for maternity cases, although an active party moved to change its constitution with the purpose of converting it into a hospital for gynæcological patients only, assigning as a reason for the proposed conversion the excessive rate of mortality among the lying-in patients (which was afterwards discovered to be due to defective drainage). As a result of the contest between the opposing parties among the subscribers to the charity it was decided to separate the departments of midwifery and gynæcology and to locate their respective patients in different buildings. This led to the foundation of the hospital for women in Shaw-street in 1880, which was placed under separate management and is devoted exclusively to gynæcological cases. The lying-in patients were soon afterwards transferred to a new building in Brownlow-hill, adjoining University College. The old building in Myrtle-street was purchased by the committee of the Cancer and Skin Hospital, and when making necessary alterations in the basement it was discovered that the drainage was in a most insanitary condition, fully accounting for the excessive mortality among the lying-in patients in past years. The lying-in hospital has done much good work and since its removal to its present habitation the health of the patients has been excellent.

The Conscientious Objector "at bay."

The "conscientious objector" received his first check in Liverpool last week at the hands of two county justices who failed to be convinced that "disbelief in the efficacy of vaccination" by an applicant for exemption was a sufficient plea to put forward to enable them to issue their certificate. On a subsequent day the same individual renewed his application through counsel but the magistrates could not be persuaded to reopen the case. The presiding magistrate, in giving the decision of the bench on the application, said that contempt for vaccination was not in the opinion of the justices a matter of conscience but one of opinion, a plea which was not provided for in the Act of Parliament. A similar case came before the Lancaster magistrates during the week with a similar result.

Oct. 4th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

New Hospitals in Aberdeenshire.

THE Aberdeen District Committee of the County Council has been authorised to acquire a site (five acres) at Summerfield, near Old Skene Road, on which to erect a new hospital. Tenders have also been accepted for building additions at Gordon Hospital, Ellon.

Aberdeen Water-supply.

The corporation's water committee, having considered the bacteriological and analytical reports on this subject—recently noticed in THE LANCET—resolved that before deciding upon any works for the improvement of the present supply inquiry should be made as to the practicability and cost of obtaining a sufficient supply of pure water from a source other than the River Dee. In this connexion the committee's attention has been called to the question of obtaining a supply from the River Avon, near Inchrory (about 60 miles from the city), and the committee accordingly resolved to recommend that the town council should remit to them to report upon the subject of the supply from that source, it being understood that they are to be entitled to obtain such professional assistance in connexion with the matter as the committee may deem necessary. The town council on Monday last adopted the report.

Proposed Public Slaughter-house at Aberdeen.

The corporation's slaughter-house committee have recommended that a private Bill be introduced in the next Parliamentary session authorising the municipality to erect at Central Park, Kittybrewster, on ground already belonging to the town council, a public slaughter-house to supersede all the existing private slaughter-houses, the borrowing power to be sought by the Bill to be £50,000. On Oct. 3rd the town council deferred the settlement of the matter owing to pressure of other business.

Aberdeen Corporation Lodging-house.

As this extensive building is almost finished, the rates per cubicle per night have been fixed, the charges varying from 6*d*. to 4*d*. A superintendent, assistant superintendent, and other servants are to be appointed at an early date.

Oct. 4th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Royal University of Ireland.

THE medical examinations of the Royal University are now in progress, the lists of candidates who have passed the second examination in medicine having just appeared.

St. Vincent's Hospital, Stephens-green, Dublin.

The address inaugurating the medical session at this hospital was delivered by Mr. J. S. McArdle on the 4th inst.

Mater Misericordiæ Hospital, Dublin.

The clinical lectures of the session commenced at this hospital on Oct. 3rd. The new prospectus includes arrangements by which the two operation theatres will for the future be used simultaneously. The greatly increased number of patients who now seek admission to the hospital for operation has rendered the addition of a second operation theatre necessary. On Oct. 3rd a lithotomy, by which no less than 117 separate and distinct uric acid calculi varying in size from that of a filbert to that of a pea were removed, was performed by Dr. Coppinger, one of the surgeons to the hospital. The patient, a man aged sixty-four years, is progressing well.

The Irish Workhouse Association.

A meeting of the executive committee of this association was held on Sept. 29th, the president, Lord Monteagle, being in the chair.

Mr. T. W. Russell, M.P., on Citizenship.

At a conference in Belfast on Sept. 28th Mr. T. W. Russell, M.P., Parliamentary Secretary to the Local Government Board, in an address on the Duties of Citizenship, spoke of the question of the Poor-law system and in doing so praised very highly the way in which in England this cast-iron system is being transformed. He said that in everything human the Irish workhouse is as inferior to the companion institution in England as it is possible for an institution to be. He also spoke of the question of sanitation and, engaged in, as he was, and having some responsibility for, the Public Health Department of the sister country, he could affirm that the science of sanitation was in its infancy in Ireland. He said in such questions as water-supply, housing of the very poor, and sewage Ireland compared very unfavourably with England. The reform of all these questions formed part of the duties of good citizens.

Londonderry Dispensary.

At a meeting of the Londonderry Dispensary Committee held on Sept. 30th Dr. Cunningham was elected medical officer of No. 1 district, in succession to Sir Acheson MacCullagh, M.D., who has been appointed an Inspector under the Local Government Board.

Effect of the Local Government Act on the Administration of the Cork General Hospitals.

At a meeting of the trustees of the Cork South Infirmary held last Friday, Mr. Maurice Healy, M.P., occupied the chair, and after the special business of the meeting had been disposed of the treasurer requested the chairman to inform them as to the alterations in the government of the hospital to result from the passing of the Local Government Bill. Mr. Healy then explained that the present board of trustees, consisting of ex-officio and elected trustees, would continue to exist, with the exception that the church dignitaries and rectors who are now trustees in virtue of their ecclesiastical offices will cease to be ex-officio trustees. The other ex-officio members will continue to be trustees and the elected members will as heretofore be eligible for re-election by the subscribers annually. But the functions of the board of trustees so constituted will be entirely different from those of the board of trustees which now administers the affairs of the hospital. After the Local Government Act comes into operation a new board of governors will be appointed, and practically the only function the board of trustees, as distinct from the board of governors, will have to perform will be to elect a certain number of governors to represent the ordinary subscribers to the hospital. The new board of governors will comprise three sections, one consisting of the members elected by the board of trustees, another consisting of those nominated by the County Council of the County of Cork, and a third consisting of those nominated by the County Council of the Borough of Cork. The number of governors to be elected by each section will be decided by the Irish Local Government Board, and the latter Board will doubtless be mainly influenced by the amount of the contribution from each body represented to the funds of the hospital. For years past the county Grand Jury and the Cork Corporation have each contributed £700 a year voluntarily towards the maintenance of the Cork South Infirmary, and under the Local Government Act the county councils will be compulsorily obliged to contribute a similar amount unless the Local Government Board decides otherwise. Furthermore, the County Council for the County of Cork will have power to contribute another £700 a year towards the maintenance of the South Infirmary or any other hospital which in their judgment is deserving of support. A vote of thanks to Mr. Healy for his lucid explanation was unanimously passed.

Erratum.—In the last letter, under the heading "The Health of Belfast," in the fourth line "341" should have been *34*.

Oct. 3rd.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Agglutination of Koch's Bacillus by Human Serum.

AT the meeting of the Academy of Sciences held on Sept. 19th MM. S. Arloing and P. Courmont communicated a paper dealing with the final stages of their researches upon the agglutinative action of human serum upon the bacillus of Koch. To obtain this reaction by means of the blood of a tuberculous subject certain precautions have to be observed which can be neglected when dealing with other diseases, such as typhoid fever for instance. The serum must be used with fully developed cultures, of which only the upper layers are taken, for the lower layers almost always contain extraneous growths. To get a marked reaction

perfectly fresh and colourless serum must be employed. The blood collected with aseptic precautions is first centrifugalised so as to separate the clot. The reaction is made to take place in sterilised tubes of very small diameter, which are laid on their sides in a sloping position so that the clusters may fall more rapidly and at the same time cover a larger area of the tube. With every serum three mixtures of different strengths are made—i.e., 1 drop of serum to 5 drops of culture, 1 to 10 and 1 to 20. The agglutinative action produced in mixtures more concentrated than 1 to 5 or less than 1 to 20 has no diagnostic significance. The interval before reaction takes place is variable, but as a rule it takes longer than in typhoid fever. The tubes are examined two hours, ten hours, and twenty-four hours after the mixture has been made. Any changes observed at a longer interval than twenty-four hours may be neglected. The tubes are examined both with the naked eye and under the microscope. A control tube of culture without any admixture of serum should always be used, which ought never to show any precipitate. At the end of twenty-four hours reaction is considered as certain if the tube contains well-marked clumps and the liquid is quite clear or presents only a trace of cloudiness. Even with all these precautions the reaction is by no means easy to get and it is always as well to compare results with the agglutination obtained with the serum of a patient undoubtedly tuberculous. The results obtained by Arloing and Courmont are remarkably interesting but are not yet sufficiently definite to draw absolute conclusions from. They examined 26 patients suffering from advanced tuberculosis, with high temperature and other infective signs. Of these 92 per cent. gave the reaction, 69 per cent. with a mixture of 1 in 10 or 1 in 20 and 23 per cent. with a mixture of 1 in 5. In 2 cases out of the 26 where no reaction was obtained the patients were in a condition of very advanced tuberculosis, a phenomenon of which the cause is at present to seek. Out of 22 patients suffering from slight pulmonary or pleural diseases 95·5 per cent. gave the reaction, 82 per cent. with mixtures of 1 in 10 or 1 in 20 and 13·5 per cent. with mixtures of 1 in 5. The only person who did not react was one with a pleuritic effusion and marked pleural thickening in whom tubercle was very doubtful, inoculation of the pleuritic fluid into a guinea-pig having produced no effect. Of 12 patients suffering from surgical tuberculous affections 50 per cent. reacted very strongly and 50 per cent. feebly; of 21 patients suffering from various disorders 14 gave no reaction and 7 a very feeble one; of 13 typhoid fever patients 6 gave a negative result; of those which did react 2 at least were suspected of being tuberculous; of 16 patients aged from eighteen to thirty years, and all apparently healthy, a reaction was given in 5 instances.

Hospital Abuse in Paris.

For a long time past the medical men of Paris have protested against the system whereby the gratuitous advice to be obtained at hospitals is abused. A system only intended for the poor and needy is exploited by persons in easy circumstances, thus depriving the medical practitioners of their lawful gains. The syndicate of medical practitioners in the Department of the Seine has sent in many unavailing protests to the Director of the Assistance Publique asking that either he should prevent any patient who did not bring incontestable proof of poverty from attending the hospital or that he at least should put up a notice that persons in easy circumstances who attended in this way and robbed both the poor and the medical men should be prosecuted and fined. In the poorer quarters of Paris many a medical man is willing to see working-class patients for a fee far less than the amount which the average working man spends daily in drink; nevertheless, it is considered quite right for all such workmen to attend the hospitals for nothing. Not only, however, do workmen attend but also tradesmen in easy circumstances and far richer people, especially when the medical man for the day happens to be a well-known practitioner. In view of the fact that all these protests have been in vain Dr. Variot, the head physician to the Hospital Trousseau for Sick Children, has decided to charge every person who is well off and comes to the hospital for gratuitous advice the sum of 20 fr. The fees thus collected will be expended in buying toys and delicacies for the poor children in his wards. Not long ago two ladies richly dressed applied at his clinic, bringing with them a child whose frock was trimmed with lace. On being asked whether they were poor they replied in the negative and Dr. Variot thereupon demanded 20 fr., being his usual fee for a consultation at his own house. They angrily refused and went away uttering threats. Some days afterwards they sent in a complaint to the Director of the Assistance Publique as to the behaviour of the medical man who had refused to give them gratuitous advice. The director promptly demanded an explanation from Dr. Variot, who replied that he did not in the least regret what he had done and that he should act in a like manner in every similar case until the director took steps to see that the interests of the poor and also of medical men were safeguarded.

Medical Aid in Theatres.

The prefect of police has just issued an edict with regard to the medical organisation for the theatres. Up to the present time the choice of medical men bound to be present in turn at theatrical representations so as to be able to give aid in case of any accident occurring among the audience or staff of the house has been left to the manager save in the case of the four national theatres—i.e., those subsidised by the Government. It has happened that on several occasions when an accident did take place that there was either no one in attendance at all or else that the proper medical man had supplied his place by some non-medical friend who was absolutely useless. The prefect has therefore given orders that in future all nominations to these posts must be submitted for his approval—a regulation which has been the cause of a great outcry among medical men. Most likely, however, the prefect only wishes to have the opportunity of being able to revoke the appointments of such medical men as shirk their duties, for hitherto the managers have appointed their own friends and have not been able to exercise any serious control over them.

Oct. 4th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The Antitoxin Monopoly.

PROFESSOR BEHRING'S application for a patent for his antitoxin, which was so severely criticised in a leading article in THE LANCET of August 27th, has been much discussed in the German newspapers, both lay and medical. The charges made by the American papers induced Professor Behring to declare in a periodical published in Marburg, his place of residence, that he did not concern himself about what the American chemists had said against him because they had spoken *pro domo*. His claim for a patent was legal and he could not understand that to make profit out of an invention in a legal way might be an immoral action. The American public would not suffer in consequence of his patent, as the serum would now be obtainable of better quality and at lower prices than before. These views of Professor Behring are strongly disapproved of by the *Münchener Medicinische Wochenschrift*, the leading medical paper of South Germany, which maintains that some methods of making money, though legal enough in themselves, are nevertheless impossible for a medical man who desires to conform to the laws of medical ethics. The criticisms of the American and English press were to be regretted, but were not unfounded. Among the leading non-medical papers, the *Berliner Tageblatt* has severely blamed Professor Behring. In an article entitled "Science and Business" a medical contributor to this periodical asked: "What would have become of the ophthalmoscope if Helmholtz had made a claim to patent his invention? What would have become of the methods of immunisation devised by Pasteur, or of the antiseptic dressing introduced by Lord Lister, if these gentlemen had acted like Professor Behring? Medical men ought not to be dealers in medical commodities." To these charges Professor Behring has replied, writing in the *Deutsche Medicinische Wochenschrift*. In his usual plain language he said that Helmholtz of course could not have attempted to patent the ophthalmoscope as there were no patent laws at that time; what Pasteur and Lord Lister would have done, supposing that it had been possible for them to obtain a patent for their discoveries, he really did not know, and he wished to ask if the medical correspondent of the *Berliner Tageblatt* knew.

From his personal acquaintance with those two gentlemen he thought himself entitled to suppose that they would have declined to defend the interests of foreign traders. He went on to mention that he did not belong to the medical profession in the strict sense of the term, as he was not engaged in medical practice and did not attend patients. He had therefore to provide means for continuing his experiments, and he was the more compelled to do so as he had received no assistance from the public in his studies. In France more than 1,000,000 francs (£40,000) were collected by the French nation and 200,000 francs (£8000) were given by the Government to the Pasteur Institute. On the other hand, what had been done in Germany? He would not have been able to continue his work if the Höchster Farbwerke had not supplied the necessary means, and he must confess that an inventor in Germany would risk very much if relying on the gratitude of the nation he should neglect to look after his own interests. The American public, he repeats, would benefit by the monopoly because the Höchst factory would now sell a better antitoxin and charge no more than the American chemists. An answer to this argument was published in the *Allgemeine Medicinische Centralzeitung* by a writer who declares that there was no need for Professor Behring to experiment at his own expense as there is a special State laboratory for such studies, and that his remarks about the ingratitude of his countrymen were quite uncalled for because very soon after he made his discovery he was not only appointed an ordinary professor with a fixed salary but was also left at liberty either to lecture or not to lecture entirely at his own option. With regard to tuberculin Germany had shown an enthusiasm which unfortunately was not justified by the results and in consequence the public had learned to be more reserved. According to the author of this communication Professor Behring was well provided for at the time when he applied for a patent in the United States. It will thus be seen that the controversy is rather animated.

Dum Dum Bullets.

At the last German Surgical Congress, which, as will be remembered, was held in Berlin, Professor von Bruns of Tübingen made a communication relative to the so-called Dum Dum bullets of the British army, recommending that their use should be prohibited by an international convention. It may therefore be of interest to hear the opinion of a German army medical officer, Dr. Körting, surgeon-general of the first German army corps, who has dealt fully with the question in a report on the war between Italy and Abyssinia, published in the *Deutsche Medicinische Wochenschrift*. He draws attention to the fact that whilst the Italian rifle of 6·5 millimetres calibre made small wounds and did not splinter the bones the 11-millimetre weapon of the Abyssinians caused lacerations of the muscles and comminuted fractures of the bones. Therefore the Abyssinians when wounded were not rendered incapable of fighting, and of 100 wounded about 80 could make their way to the surgeon without assistance, some of them being men with perforating wounds of the chest. Notwithstanding the very primitive dressing thousands of Abyssinians recovered within three weeks. The soldiers of the Negus very soon became aware of these facts and when arms captured from the Italians were distributed to them they did not hesitate to remove the hard mantle from the tip of the bullet. This example was then followed by the British soldiers in the Chitral campaign and it is in Dr. Körting's opinion an act of self-protection against an enemy who is not sufficiently disabled by the original projectile. Rifles having a calibre of less than 8 or 9 millimetres are incapable of effectually disabling an enemy. Dr. Körting therefore considers that there is no ground for the indignation expressed by Professor Bruns.

Treatment of Headache.

It is proved by experience that headache may sometimes be relieved by compression of the head; persons suffering from headache instinctively put their hands on their temples and feel great benefit therefrom. To make this compression more efficacious Dr. Sarason has suggested an instrument which he describes in the *Deutsche Medicinische Wochenschrift*. It consists of two plates which by a spring are firmly pressed on the temples and it looks very like a double truss. By the compression of the temporal arteries the circulation of the blood in the head is regulated and pain is relieved, especially in angiopathic hemicrania. The apparatus, which has proved useful in many cases, is termed "Migrainator" and may be had from Messrs. Schönlin and Co., Munich.

Oct. 4th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Oysters and Sewage Contamination.

BESIDES her objectionable habit of consuming oysters all the year round, allowing them no "close time," as in the British Isles, Italy has been far from careful to keep the beds in which they breed, still more the beds in which they are fattened, exempt from sewage contamination. Not a moment too soon Dr. Guido Bordoni-Uffreduzzi, Professor of Hygiene and Director of the Hygienic Laboratory in the University of Turin, has sounded a note of warning and the public has not been slow to give it due heed. Great centres of population like Milan, for example, which gets four-fifths of her large oyster-supply from the Gulf of Spezia, are filled with alarm and considering how severely the Lombard capital has been visited with typhoid fever her dread of a fresh importation of the disease through the molluscous dainty is all too intelligible. On the other hand, the oyster-breeding and oyster-vending interests are in a panic over their threatened loss of custom and have challenged the soundness of Professor Bordoni-Uffreduzzi's facts and inferences. He in turn is able to cite the evidence adduced by Dr. Cartwright Wood and Dr. Klein[1] in confirmation of his position, while the "oyster interest" replies by reference to M. J. Chatin's demonstration before the Paris Academy of Medicine[2] that "in natural sea-water the typhoid germ dies rapidly" before it can injuriously affect the oyster. True, oyster breeders, in order to fatten their wares more effectively, deposit the mollusc at river mouths in a mixture of salt and fresh water and this latter infects the oyster with the germs it has accumulated in its course. The breeders, however, assert that such practice has long been discontinued, that at Taranto and Spezia, for instance, the oysters are taken from beds placed far out at sea, away from all urban contamination, whence they are taken directly for transport to the inland towns. Both Professor Bordoni-Uffreduzzi and the breeders draw largely on British experience, and while the former urges his antagonists to adopt the procedure of their British contemporaries and to court a commission of inquiry into the whole subject, these gentlemen protest that such is their own intention and that they have nothing to fear from the most searching scrutiny into their methods. However the controversy may terminate the oyster-consuming public cannot fail to benefit. Already the oyster-baskets which used to be moored off Santa Lucia on the Neapolitan strand are protected from the sewage which gave them an evil name, the sewage being carried away in pipes to Cumae; and a similar deposit at Savona, a Ligurian seaport, *non funziona più* (is no longer in existence).

Tardy Honours to a Medical Worthy.

Lake Como reflects in its still waters few lovelier villages than Bellano, with its picturesque harbour—whence the choice abundant fruits of the Monte Grigna are exported—with its attractive edifices, its busy market-place, its thriving silk factories, and its Duomo, the *chef-d'œuvre* of Giardino Loria, dating from 1348. The place, too, has its historical, its literary, and its scientific celebrities, prominent among whom are Tommaso Grossi, the dramatist, and his yet greater predecessor, Sigismondo Boldoni, physician, philosopher, and poet as well. Born at Milan in 1597, Boldoni graduated in literature and medicine at Padua, lived for some time in Urbino and Rome, returned in 1623 to his native city, where he received an appointment in the Collegio dei Medici, and shortly thereafter was called to the University of Pavia to fill the chair of philosophy. He died at his post in 1630 the victim of epidemic disease which he had striven heroically to circumscribe. Young as he was he had made himself famous far beyond the scene of his activity. He was a brilliant lecturer and his "Orationes Academicæ" found readers throughout contemporary Europe. In poetry his chief work is his "Caduta dei Longobardi" (Fall of the Lombards), still admired and commented on. His native Bellano has now erected a bust of him in her midst and its unveiling evoked a numerous attendance of

[1] THE LANCET, Jan. 9th, 1897, p. 124.
[2] THE LANCET, March 27th, 1897, p. 922.

literary, medical, and civic notables from the chief Lombard centres. The spokesman of the occasion was Professor Mario Cermenati, who dwelt on the distinction brought to the much frequented Lake Como by the celebrities who lived or were born on its banks. From Pliny in antiquity to Alessandro Volta in the nineteenth century the Larian community never lacked illustrious representatives, among whom the "physician, philosopher, and poet" Boldoni was now if all too tardily yet worthily recognised. At the evening banquet the Senator Achille Polti once more commemorated the merits of the hero of the day and Bellano concluded the "festa inaugurale" with an effective illumination of her streets, her harbour, and her lovely lake margin.

Killed by Lightning.

Year by year the thunderstorms which accompany the transition from summer to autumn increase in violence, causing greater damage to cattle and crops and even numbering more human victims. Within the last few days the rural districts have suffered heavily from these visitations. From Palermo I hear that in the neighbourhood of Villalba a lightning stroke killed a youth seventeen years of age and severely injured two others when at work in the fields. At Amelia on the same day (the 28th ult.) a group of agricultural labourers, suddenly overtaken by torrential rainfall, fled in various directions, and one of them imprudently seeking shelter under an oak tree was almost immediately struck dead by lightning. Near Caserta the previous day a peasant was killed by a similar visitation while gathering in his crop of maize. The tale of such casualties is already an unusually long one, and taken in connexion with the abnormal frequency and violence of hailstorms and cyclones, especially in the Alta Italia, adds greatly to the interest with which preventive legislation in the shape of bills for "rimboschimento" (reafforesting) and regulating the river courses is awaited in Parliament and in the country. For if one thing is more certain than another it is that atmospheric disturbance, taking the form of torrential rainfall, thunderstorms, and cyclones, increases in the direct ratio of tree-felling without compensative replanting—a fact so impressively borne in upon the Italian public that, impatient of official delays, it has through many of its more enlightened and energetic representatives—mainly medical, I may add—organised associations "Pro Silvis" and "Pro Montibus" to conserve the forest growth and arrest the denudation of hillsides so as to obviate at their source the meteorological changes which have altered the climate of provinces and made the annual floods an ever-augmenting evil. In six weeks Parliament will reassemble, and amid the many urgent questions which clamour for serious attention and salutary solution are the hydraulic and reafforesting innovations to be proposed by the Ministers of Public Works and Agriculture respectively. Effective reform in both these directions would assuredly go far to solve the difficulties, industrial and economic, which, if unsurmounted, must perpetuate and aggravate the social malaise which breaks out in bread-riots, in brigandage, and in the thousand and one retarding causes of Italy's prosperity and peace.

A Gynæcological Tour.

At the instance of the Minister of Public Instruction (His Excellency Dr. Guido Baccelli) the professor of gynæcology, theoretical and clinical, in the Neapolitan School of Medicine (Dr. Giuseppe Spinelli) is about to start on a visit to the leading universities of Austria, Hungary, and Germany, with the special object of studying the methods there adopted in teaching obstetrics in class-room and maternity hospital. Italy, well represented in other departments of medicine, is certainly behindhand in gynæcological practice, and has much to learn in that particular from such admirably-equipped seats of learning as Vienna, Berlin, Munich, Dresden, and Leipsic. Proficiency in obstetrics, theoretical and practical, is still, I believe, an "optional" qualification on the part of her medical graduates, and it is only in exceptional instances, mainly in her chief centres of population, that the gynæcologist attains the professional standard so generally reached by his colleagues in surgery and medicine proper. To no better hands could Dr. Baccelli have entrusted the "mission of inquiry" than to those of the Neapolitan professor, whose report embodying his experiences is looked forward to with much interest, as the prelude to innovations fraught with signal benefit to the medical student and practitioner throughout the peninsula and islands.

The Medico-Military Officer in Africa.

The Dark Continent excites a weird fascination over young Italy, particularly over those of her sons who, medically trained, are gifted with tastes and aptitudes in the various fields of anthropology, climatology, and natural history. Scientific exploration already owes much to her youth so endowed and so minded, and nothing but the limited extent of her African possessions, still further curtailed by the abandonment of her "forward" equatorial policy, explains the comparative diminution in the number of her "medical paladins" witnessed of late years. Denied the coveted opportunity of such service by their own Government they seek it under the ægis of other powers and become competitors together with young French, or still more with young Belgian, graduates for posts in the exploring or political expeditions fitted out from Paris or Brussels. From Milan I hear that four of her medically qualified youths—Dr. Avezza, Dr. Caravaggi, Dr. Monti-Martini, and Dr. Paravicini—have after a severe competition been nominated "medici militari" for three years in the colonial expedition about to start from Belgium for the Congo, and it is not too much to expect that we may ere long receive from them such contributions to anthropological science and nature-study as their compatriot colleagues have already made in the latitudes south and west of Abyssinia.

Oct. 1st.

Obituary.

JOHN THOMAS NICHOLSON LIPSCOMB, M.D. ST. AND., F.R.C.S. ENG.

DR. J. T. N. LIPSCOMB, of St. Albans, whose death occurred there on Sept. 21st, belonged to a family which had been connected with the town for more than eighty years, being the eldest son of Mr. John Thomas Lipscomb, who went to St. Albans in 1815 to practise as a medical man. Mr. Lipscomb, senior, was elected alderman in 1818 and mayor in the following year. He continued to be an alderman for more than fifty years and was the first mayor under the Corporation Reform Act of 1835. Dr. Lipscomb, the subject of the present notice, was born in St. Albans in 1819, his mother being a daughter of the Rev. John Nicholson, rector of the Abbey parish church. He received his medical education at Guy's Hospital and in 1841 became qualified as M.R.C.S. Eng. and L.S.A. The same year he entered on practice in partnership with his father. In 1844 he graduated as M.D. at St. Andrews University and in 1856 he became a Fellow of the Royal College of Surgeons of England. Dr. Lipscomb continued in active practice from 1841 until about four or five years ago, when his strength became unequal to the fatigues of professional work, and for the last two years he had been in obviously failing health. Among his various appointments may be mentioned those of medical officer to the prison both before and since it was taken over by the Government, honorary consulting physician to St. Albans Hospital, and medical officer under the Factory Acts. Notwithstanding his numerous professional engagements Dr. Lipscomb took an active part in the public life of the town. He was first elected to the town council in 1855 and was the last survivor of the corporation of that date. At the expiry of the period of three years for which he was elected he withdrew from the council and did not return to it till 1869. Mr. Lipscomb, senior, was one of the four aldermen, and on his death, in September, 1869, the position was given to his son, who retained his seat on the bench of aldermen for fourteen years, only retiring in 1883. In 1870 Dr. Lipscomb was elected mayor. For forty-one years he was rector's churchwarden in connexion with the Abbey church, holding that office under three different rectors. He was also senior Justice of the Peace for the city and one of the original members of the Abbey Restoration Committee.

SOUTH DEVON AND EAST CORNWALL HOSPITAL.—A very successful bazaar was held on Sept. 27th and 28th at the Plymouth Guildhall in aid of the funds of the South Devon and East Cornwall Hospital, Plymouth. The receipts for the two days were nearly £1400.

Medical News.

FOREIGN UNIVERSITY INTELLIGENCE.—*Columbia University, Missouri:* Dr. Paul Kaufmann, formerly of the Cairo Medical School, has been appointed Professor of Bacteriology and Pathological Anatomy.—*Innsbruck:* Dr. Ludwig Kerschner, Extraordinary Professor of Histology and Embryology, has been granted the rank and title of Ordinary Professor.—*Gratz:* Dr. Alphons Edler von Rosthorn, of the German University of Prague, has been appointed Professor of Midwifery and Gynæcology, in succession to the late Dr. Rokitansky.—*Lemberg:* Dr. Emanuel Muchek has been appointed Professor of Ophthalmology.—*Vienna:* Dr. A. Mosetig R. von Moorhof has been appointed Extraordinary Professor of Surgery with the title of Ordinary Professor.

LITERARY INTELLIGENCE.—Messrs. William Green and Sons, publishers, of Edinburgh, announce the publication early next year of an Encyclopædia Medica by authoritative writers on the lines of their two legal encyclopædias.

COMPLIMENTARY BANQUET.—On Sept. 24th many of the colleagues and other friends of Mr. D. Edgar Flinn, M.R.C.P., F.R.C.S. Irel., D.P.H., of Kingstown, entertained him at a banquet as a mark of esteem and an expression of their pleasure on his appointment to the office of Medical Inspector to the Local Government Board, Ireland. Mr. R. L. Swan, F.R.C.S. Irel., Vice-President of the Royal College of Surgeons in Ireland, occupied the chair, and in proposing the toast of the evening, "Our Guest," stated that Mr. Flinn had all the qualifications to eminently fit him for the important post to which he had been appointed. He had been for some years a medical officer of health in England, and they all knew his thorough knowledge of sanitary science.

DEATH OF A MEDICAL PRACTITIONER THROUGH THE BITE OF AN INSECT.—On Sept. 27th Mr. George Hart, M.R.C.S.Eng., aged thirty-eight years, died at Bolton from septicæmia and septic pneumonia the results of an insect bite. He was in his usual health up to about ten days before he died, when he complained of a sharp pain near the right eye, the skin over which afterwards began to swell and a small pustule to form. Upon his return from a professional night visit he had a rigor which was followed by extensive cellulitis in the neighbourhood of the pustule and by the development of pneumonic symptoms. Septicæmia was diagnosed by his professional colleagues and confirmed by Dr. Jones, surgeon to the Manchester Royal Infirmary, and anti-streptococcic serum was resorted to, together with free incision of the affected part, but despite unremitting medical attention and the most careful nursing he succumbed. He leaves a widow but no family. Mr. Hart was a native of Bolton and had been in practice thirteen years there, and his genial, open nature had endeared him to a large circle of friends and patients, by whom his loss is very deeply felt. He studied medicine at Owens College (now Victoria University), Manchester, and qualified as M.R.C.S. Eng. in 1885.

THE LATE DR. K. N. BAHADURJI.—At a meeting of the Bombay Medical Union and of the native medical profession, which was held at Readymoney Building, Appolo Bunder, on August 27th, it was announced that from all parts of India telegrams and letters expressing deep regret for the loss sustained by the union and the medical profession throughout India had been received. The following was passed as a resolution: "This meeting desires to place on record its sincere and deep sense of sorrow at the great loss sustained by the medical profession, the public, and the country by the sudden and untimely death of Dr. K. N. Bahadurji, President of the Bombay Medical Union, and expresses its appreciation of his eminent, varied, and lasting services to the cause of medical education, reform, advancement of science, and the welfare of the profession. And it further records his zealous, devoted, and self-sacrificing work for the good of the city and in the cause of humanity during the last two plague epidemics, and resolves that a copy of this resolution, with the expression of the sympathy of this meeting, be communicated to his father, Mr. Nusserwanji Dorabji Bahadurji, by the honorary secretaries of the union."

THE MEDICAL OFFICER OF HEALTH OF BOLTON.—Dr. John E. Gould's salary as medical officer of health of Bolton has been increased to £600 and he has been at the same time relieved of the duties of public analyst. The salary formerly was £350 as medical officer of health, with £50 added for acting as public analyst.

DEATH FROM OIL OF CLOVES.—An inquest was held at Cardiff on Sept. 27th upon the body of a man, aged forty-eight years. The widow stated that he had drunk "about a quarter of a half-pint bottle" of oil of cloves, she being under the impression that it was whisky. After hearing the medical evidence the jury returned a verdict that death resulted from an overdose of oil of cloves taken by misadventure.

WEST HARTLEPOOL AMBULANCE CLASS OF THE NORTH-EASTERN RAILWAY.—On Friday, Sept. 30th, Mr. W. Gray, M.D. Edin., the lecturer to this class, was presented with a marble clock and bronzes. In the course of presenting the medallions and certificates to the members of the class Mr. Jackson, the general secretary, said that 28 candidates had passed the first year's examination, 17 the second year's examination, and 8 the third year's examination—a total of 53. During the existence of the North-Eastern Railway Centre, which was formed in 1896, 2083 candidates had passed the first year's examination, 971 the second year's examination, and 587 the final examination. There were now close upon 4000 members distributed over the system, and there were 168 properly equipped stations. The number of cases which had been attended by members was 1128 in 1896, 2451 in 1897, and 2605 for the first half of the present year.

LEEDS MEDICAL PRACTITIONERS' DINNER.—On Monday, Oct. 3rd, in the Queen's Hotel, Leeds, a representative gathering of the medical men of Leeds and the surrounding district assembled to entertain to dinner Dr. Cullingworth, who had given the introductory address at the Yorkshire College on the occasion of the opening of the winter session. The chair was occupied by Professor C. J. Wright, who was supported by the Dean of the Medical Department (Mr. Scattergood), Principal Bodington, Mr. Teale, and others. Professor Wright, who proposed the toast of the health of the guest of the evening, alluded to the esteem in which Dr. Cullingworth was held by the profession at large and to the interest with which his successful career had been watched by his old Leeds fellow-students. Dr. Cullingworth, in replying, expressed his sense of honour in being called to visit his old school and showed his warm attachment to it. He referred in eulogistic terms to the work of Dr. Hardwicke, to whose example and influence much of his success was due. In conclusion Dr. Cullingworth proposed "Success to the Medical Department of the Yorkshire College." The toast was responded to by Dr. Wardrop Griffith.

LEEDS INFECTIOUS HOSPITALS AT MANSTON.—Accompanied by the Lady Mayoress, the Lord Mayor of Leeds opened on Saturday, Oct. 1st, the infectious diseases hospitals which have been erected by the corporation on their Manston estate at a cost of some £40,000. The hospital buildings cover an extent of 100 acres. The chairman of the Hospitals Committee, after the reception of the Lord Mayor, said the want of accommodation had undoubtedly been acutely felt by the wage-earning classes in Leeds. For many years Leeds had been content to possess some 100 to 120 beds for infectious diseases, which represented roughly about one bed for every 3000 inhabitants. It had been laid down more or less as a rule that industrial centres like Leeds should have not less than one bed per 1000 of the population. This would mean that Leeds should have 400 beds for the present estimated population. The accommodation now provided, with the accommodation already available at the Beckett-street Hospital, would bring the total number of beds available up to 194, or some 200 less than the accommodation actually required. The Lord Mayor said the city was to be congratulated on the completion of such excellent buildings as those in which they were assembled. The study of the history of infectious disease clearly proved that it was rifest where men were most crowded and where fresh air failed to penetrate. Knowledge which had been gained by painful experience was now being used for the benefit of our large cities, but could be hindered by ignorance, carelessness, and dirt.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

ALLINGHAM, W., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the First Sanitary District of the Salisbury Union.

CAHILL, M., L.R.C.P., L.R.C.S. Irel., has been appointed a Medical Officer for the No. 2 Division of the Fethard Dispensary District.

CHALLENOR, H. S., M.R.C.S., has been appointed a Medical Officer by the Abingdon Urban and Rural District Councils.

CLARK, ANDREW, F.R.C.S., has been appointed a Consulting Surgeon for the St. Marylebone General Dispensary, Welbeck-street, London.

CUNINGHAM, H. W., M.D., B.Ch. Irel., has been appointed a Medical Officer for the City of Derry Dispensary District, vice Sir A. Mac Cullagh, resigned.

DAVIS, ARTHUR N., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Superintendent of the Devon County Asylum, Axminster, vice G. J. S. Saunders, resigned.

DE RENZI, HENRY C. C., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Honorary Visiting Physician to the Christchurch Hospital, New Zealand, vice P. S. Bolger, resigned.

DONKIN, H. B., M.D. Oxon., F.R.C.P. Lond., M.R.C.S., has been appointed a Commissioner of Prisons for England and Wales, vice Captain W. J. Stopford, C.B., retired.

EASTMENT, J. W., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Pelhams Sanitary District of the Bishop Stortford Union, vice J. P. Wagstaff.

GRINLING, F. N., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health by the Walker Urban District Council.

HARRISON, C., M.D. St. And., M.R.C.S., D.P.H. Camb., has been appointed Medical Officer of Health by the Bracebridge Urban District Council.

HITCHON, H. H., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Borough of Heywood, vice H. Wisken.

HUGHES, J. M., M.B., Ch.M. Edin., has been appointed Medical Officer for the Workhouse and Ruthin Sanitary District of the Ruthin Union.

INNES, J. C., L.R.C.S. Edin., has been re-appointed Medical Officer of Health by the Crawford Rural District Council.

MACQUEEN, A., M.D. Edin., has been re-appointed Medical Officer of Health by the Blore Heath Rural District Council.

MUIR, DAVID CLARK, M.D., C.M. Glasg., D.P.H. Cantab., has been appointed Medical Officer to the Abertillery (Mon.) District Council.

PARSONS, LAWRANCE D., has been appointed Junior Medical Officer to the Cornwall County Asylum.

POLLOCK, J. R. R., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health by the Tiverton Rural District Council.

RAY, JOHN HOWSON, M.B., Ch.M. Vict., F.R.C.S., has been appointed Medical Officer for the Salford School Board.

REEDE, A. K., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Churchstanton Sanitary District of the Taunton Union.

ROWLANDS, HUGH PUGH, M.D. Durh., L.R.C.P. Lond., M.R.C.S., has re-appointed Medical Officer for the Llanegryn District of the Dolgelly Union.

RUSSELL, JAMES R., M.D., F.F.P.S. Glasg., has been appointed a Medical Member of the Local Government Board for Scotland.

THOMAS, WILLIAM, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Llanfechell Sanitary District of the Anglesey Union, vice G. J. Jones, resigned.

Vacancies.

For further Information regarding each vacancy reference should be made to the advertisement (see Index).

ADDENBROOKE'S HOSPITAL, Cambridge.—Resident House Physician. Salary £65 per annum, with board, lodging, and washing in the Hospital.

BETHLEM HOSPITAL.—Two Resident House Physicians for six months. Apartments, complete board and washing provided. Applications to the Treasurer, Bridewell Hospital, New Bridge-street, London, E.C.

BIRMINGHAM AND MIDLAND EAR AND THROAT HOSPITAL, Edmund-street, Birmingham.—House Surgeon for six months. Honorarium £21, and board, lodging, and washing provided.

BURY INFIRMARY.—Junior House Surgeon. Salary £60 per annum, with board, residence, and attendance.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's-inn-road, W.C.—House Surgeon. Board and residence provided in the Hospital.

COUNTY BOROUGH OF CROYDON.—Resident Medical Officer at the Croydon Borough Hospital for Infectious Diseases for one year. Salary £120 per annum, rising to £140 at the end of six months, with board and residence. Applications to Dr. Wilde, Town Hall, Croydon.

DOVER HOSPITAL.—House Surgeon, unmarried. Salary commencing at £100 a year, with board and lodging.

DUNDEE ROYAL LUNATIC ASYLUM.—Two Medical Assistants. Salary £100 each, with board and lodging.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—Medical Officer for the Casualty Department for six months. Salary at the rate of £100 per annum.

GRAVESEND HOSPITAL.—House Surgeon. Salary £80 per annum, with board and residence.

GREAT YARMOUTH HOSPITAL.—House Surgeon. Salary £90 per annum, with board and lodging, but no wines, spirits, beer, &c., are found.

HASTINGS, ST. LEONARDS, AND EAST SUSSEX HOSPITAL, Hastings.—Assistant House Surgeon for six months. Gratuity of £10, with residence, board, and laundry.

HOSPITAL FOR WOMEN, Soho-square, London.—House Physician for six months. Salary £30 for that period.

INFIRMARY FOR CONSUMPTION AND DISEASES OF THE CHEST AND THROAT, Margaret-street, Cavendish-square, London.—Physician-in-Ordinary.

INFIRMARY OF THE CITY OF LONDON UNION.—Assistant Medical Officer at the Infirmary, Bow-road. Single or widower without children. Salary £150 per annum, with furnished apartments at the Infirmary, rations, and washing, subject to statutory deductions. Applications to the Clerk to the Guardians, 61, Bartholomew-close, E.C.

KENT COUNTY ASYLUM, Chartham, near Canterbury.—Third Assistant Medical Officer, single. Commencing salary £120, with board, washing, and furnished rooms.

LEEDS UNION.—Assistant Medical Officer for the Workhouse Schools and Infirmary, Beckett-street, Leeds. Single. Salary £100 per annum, with board, washing, apartments, and attendance, subject to statutory deductions. Applications to the Clerk, Poor-law Offices, East Parade, Leeds.

LEICESTER INFIRMARY.—House Surgeon. Salary £120 the first year, rising £10 per annum until the third year. Board, apartments, and washing provided.

LONDON HOSPITAL, Whitechapel, E.—Assistant Surgeon.

LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W.—Resident Medical Officer for one year. Salary 100 guineas per annum, with board, lodging, and washing.

LONDON THROAT HOSPITAL, 204, Great Portland-street.—House Surgeon (non-resident) for six months. Salary at the rate of £25 per annum.

MACCLESFIELD UNION.—District Medical Officer and Public Vaccinator for the Bollington District. Salary £45 per annum and Public Vaccinator at such fees as the Local Government Board may allow. Subject to statutory deduction. Applications to the Clerk to the Guardians, Macclesfield.

NATIONAL DENTAL HOSPITAL AND COLLEGE, Great Portland-street, London.—Anæsthetist.

NORTH RIDING INFIRMARY, Middlesbrough-on-Tees.—House Surgeon, without a family. Salary £100 a year, with lodging, board, and washing, and £5 a year instead of beer.

OLDHAM INFIRMARY.—Junior House Surgeon. Salary £70 per annum, with board and residence.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo Bridge-road, London.—Resident Medical Officer for twelve months. Salary £70, with board, lodging, and washing.

ROYAL NATIONAL HOSPITAL FOR CONSUMPTION, Ventnor, Isle of Wight.—Assistant Resident Medical Officer, unmarried. Salary £80 per annum, with board and lodging in the Hospital. Applications to the Board of Management at the London offices, 34, Craven-street, Charing-cross.

SWANSEA GENERAL AND EYE HOSPITAL.—House Surgeon for one year. Salary £50 per annum, with board, apartments, washing, and attendance.

TEIGNMOUTH HOSPITAL, South Devon.—House Surgeon (to act also as Secretary). Salary £80, with board, lodging, and washing.

UNIVERSITY COLLEGE, London.—The Sharpey Physiological Scholarship. Applications to the Secretary.

VICTORIA HOSPITAL FOR CHILDREN, Queen's-road, Chelsea, S.W., and the VICTORIA CONVALESCENT HOME, Broadstairs.—House Surgeon. Honorarium £50, with board and lodging in the Hospital.

WEST LONDON SCHOOL DISTRICT.—Dentist to attend the children in the District School at Ashford, near Staines, Middlesex. The remuneration at the rate of £60 per annum, including travelling expenses. Applications to the Clerk to the Managers, Ashford, Middlesex.

WESTMINSTER HOSPITAL, Broad Sanctuary, S.W.—Physician.

Births, Marriages, and Deaths.

BIRTHS.

HEWAN.—On Sept. 4th, at Cinnamara, Assam, India, the wife of John Hewan, L.R.C.P. Lond., M.R.C.S. Eng., of a daughter.

LANGDON-DOWN.—On Wednesday, Sept. 21st, at Carina, Teddington, the wife of Reginald L. Langdon-Down, M.B., M.R.C.P., of a daughter.

LAWSON.—On Sept. 30th, at Chislehurst, the wife of Hugh Lawson, M.R.C.S., of a daughter.

MARRIAGES.

FALLA—CAVE.—On Sept. 27th, at the parish church of St. Saviour, Jersey, Walter Falla, M.R.C.S. Eng., L.R.C.P. Lond., of Adelaide Lodge, St. Helier, to Clara Evelyn, eldest daughter of Lieutenant-Colonel Walter Cave, late Royal Irish Fusiliers, of St. Saviour's-crescent.

TAYLOR—WINK.—On Sept. 28th, at St. Paul's, Grove-park, Frederick Ryott Percival Taylor, M.D., B S. Lond., to Edith, elder daughter of John A. Wink, Clevelands, Chiswick.

DEATHS.

AITCHISON.—On Sept. 30th, at Priory-terrace, Kew-green, Surrey, James Edward Tierney Aitchison, M.D., F.R.S., LL.D., retired Brigade-Surgeon of H.M. Bengal Army.

APPLETON.—On Oct. 1st, at The Lizard, Cornwall, John Ellis Appleton, M.R.C.S., L.R.C.P. Lond., aged 32 years.

FISHER.—On Sept. 28th, suddenly, at South Queensferry, N.B., Octavius Stephens Fisher, aged 35, Staff-Surgeon R.N., H.M.S *Rodney*.

N.B.—A fee of 5s. is charged for the insertion of Notice of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (10th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (9.30 A.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.), London Throat Hospital (2 P.M.).

TUESDAY (11th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat Hospital (2 P.M. and 6 P.M.), Royal Ear Hospital (3 P.M.).

WEDNESDAY (12th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat Hospital (2 P.M.).

THURSDAY (13th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex, (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.).

FRIDAY (14th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat Hospital (2 P.M. and 6 P.M.).

SATURDAY (15th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.), London Throat Hospital (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (10th).—MEDICAL SOCIETY OF LONDON.—8 P.M. General Meeting. 8.30 P.M. Ordinary Meeting. Mr. E. Owen (President): Remarks Introductory to the Work of the Session.—Dr. W. H. Allchin: Some Considerations Preliminary to the Study of Dyspepsia.

WEDNESDAY (12th).—HUNTERIAN SOCIETY (London Institution, Finsbury-circus).—8.30 P.M. Dr. J. F. Payne: The Increase of Cancer. (Hunterian Society Lecture.)

THURSDAY (13th).—BRITISH GYNÆCOLOGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. Specimens will be shown by Mr. A. Giles, Mr. R. H. Hodgson, Mr. F. B. Jessett, Mr. J. M. Laurie, Mr. C. Martin, and Mr. J. W. Taylor. Paper: Mr. C. Martin: On some Moot Points in the After-treatment of Cases of Abdominal Section.

FRIDAY (14th).—CLINICAL SOCIETY OF LONDON (20, Hanover-sq., W.).—8.30 P.M. Presidential Address. Papers:—Dr. Herringham: A Case of Myositis Ossificans with Skiagraphs of the Patient.—Dr. A. Garrod: Cases illustrating the Association of Congenital Heart Disease with the Mongolian Type of Idiocy.—Dr. Still: Erythema Enematogenes (Enema Rash) in Children.

WEST KENT MEDICO-CHIRURGICAL SOCIETY (Royal Kent Dispensary, Greenwich-road, S.E.).—8.15 P.M. Election of Officers and Council for Session, 1898–99. Exhibition of Clinical Cases, Specimens, &c., by Dr. Herschell, Mr. E. Clarke, Dr. Dockrell, Dr. Toogood.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (10th).—LONDON POST-GRADUATE COURSE.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Dr. E. Law: Examination of Ear, Throat, and Nose.

TUESDAY (11th.)—WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM (73, Welbeck-street).—4 P.M. Dr. T. D. Savill: On the Diagnosis of Disorders of the Nervous System, illustrated by Cases of Syphilitic Affections.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, W.C.).—3.30 P.M. Dr. Beevor: Cerebral Localisation.

LONDON POST-GRADUATE COURSE.—Hospital for Skin Diseases, Blackfriars, 4.30 P.M., Dr. P. Abraham: Prurigo and Pruritis.—Bethlem Hospital, 2 P.M., Dr. Craig: Mania—Acute, Hysterical, Acute Delirious.

WEDNESDAY (12th).—LONDON POST-GRADUATE COSURE.—Parkes Museum, Margaret-st., W., 4.30 P.M., Prof. A. Wynter Blyth: Refuse Removal and Disposal.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Dr. S. Taylor: Surface Anatomy of the Head and Neck.

THURSDAY (13th).—LONDON POST-GRADUATE COURSE.—Central London Sick Asylum Cleveland-st., W., 5.30 P.M., Mr. J. Hutchinson: Clinical Lecture.

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Dr. Barlow.

CHARING-CROSS HOSPITAL.—4 P.M. Dr. Mitchell Bruce: Clinical Demonstration on Cases in the Wards.

THE LONDON SKIN HOSPITAL (40, Fitzroy-square, W.).—Mr. J. Startin: Gouty Eczema.

FRIDAY (14th).—LONDON POST-GRADUATE COURSE.—King's College, 3 to 5 P.M., Prof. Crookshank: The Microscope and Methods of Cultivation.

WEST LONDOR POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Dr. S. Taylor: Surface Anatomy of the Abdomen and Thorax.

KING'S COLLEGE (London).—8 P.M. Dr. W. J. Simpson: Introductory Lecture to a Course of Lectures and Demonstrations for Sanitary Inspectors.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

ADENOIDS AND LARYNGISMUS.

MR. LENNOX BROWNE, referring to the account of a case of laryngeal stridor published in THE LANCET of August 27th (p. 552), writes to us to state that so long ago as Feb. 15th, 1890, he expressed in the columns of the *British Medical Journal* "a tolerably sure conviction that in almost every case of laryngismus, as well as in those of tetany and convulsions, the subject would be found to be a mouth-breather and that if sought for adenoid growths would always be discovered."

WHAT IS A *BONÂ-FIDE* STUDENT?

To the Editors of THE LANCET.

SIRS,—A gentleman whom I have for some time employed as dispenser and bookkeeper, and who has sat two or three times for the final examination of the triple qualification without complete success, has now passed in midwifery and is exempted from appearing in that subject again. I should like to ask you your opinion, taking into consideration the recent resolution of the General Medical Council, whether I am justified in allowing him to attend midwifery cases under my supervision. He is an excellent accoucheur and could be very useful in this capacity while he is preparing himself for examination in the remaining subjects of the final. In the notice from the General Medical Council to general practitioners forbidding the use of unqualified assistants there is a clause which appears to me to countenance the use of *bonâ-fide* medical students in this respect, but I should like my opinion confirmed. I am, Sirs, yours faithfully,

Oct. 4th, 1898. L.R.C.P.

*** We doubt if the employé in question is the sort of student contemplated by the General Medical Council and think that to allow him to attend cases of midwifery might subject "L.R.C.P." to censure.—ED. L.

A QUESTION OF DIAGNOSIS.

To the Editors of THE LANCET.

SIRS,—Three days ago I was called to see a woman, aged thirty-six years, whom I had been attending for some time for various minor ailments, chiefly dyspepsia. On my arrival I found her in bed, having been lifted therein after a fall. She had been attending to her household duties as usual and was just about to cut some bread when suddenly without a moment's warning she fell to the ground. I found her speechless and with the right arm and leg paralysed. She was not unconscious nor was there loss of sensation on the paralysed side. The tongue pointed to the paralysed side. Taking all the facts of the case into consideration, and especially as I found on examining the heart that there was mitral stenosis, I made a diagnosis of embolism. The friends expressed a desire to have a second opinion, and accordingly a colleague was called in, a man of many years' experience (I am myself only a little more than two years qualified). He disagreed with the diagnosis of embolism and suggested that the condition was one of "congestion of the brain due to biliousness" (these are his exact words). I should say th the day before the stroke the patient had had an

attack of vomiting and diarrhœa. But I never in my student days heard of hemiplegia and aphasia brought on in such a way nor can I find any reference to such a case in any books at my command, I should therefore be very grateful if you or any of your readers would tell me if such a thing has ever occurred in their experience or if it is possible. I may say that there has not yet been the slightest improvement in the patient's condition as regards the paralysis although I have acted on my colleague's suggestion and treated the "biliousness."

I am, Sirs, yours faithfully,

Sept. 28th, 1898. DUBITANS.

P.S.—Of course, I am not asking you to decide between my colleague and myself nor shall I make any use of any opinions I may receive. I merely seek for information for my future guidance.

'FUCUS VESICULOSUS.'

IN reference to the letter of "Enquirer," published in THE LANCET of Oct. 1st, page 906, Messrs. Parke, Davis, and Co., of 451, Oxford-street, write to us that they sell large quantities of it and receive favourable accounts from those who use it. They will be glad to reply to any communication which "Enquirer" may make of them, either personally or by letter, and they enclose us a small brochure on the seaweed in question. M. Duchesne-Duparc is said to have been the first to recommend it as a means of reducing obesity. According to him the remedy is best taken in the morning fasting, and its use requires no change in the ordinary diet; much farinaceous food, beer, prolonged baths, and sedentary habits should, however, be avoided. Dr. Griffith, author of "Corpulence, or How to Get Lean," describes his personal experience of the treatment in the *Baltimore American* (New Preparations, 1878). A patient under his care who had been drinking an infusion with the expectation that it would cure psoriasis informed him that it had done no good, but that it had diminished his fat quite considerably. Dr. Griffith then himself commenced drinking an infusion of it. He says: "In the course of a few weeks my burdensome form grew 'small by degrees and beautifully less,' much to my satisfaction. ..... I administered it to three of my corpulent neighbours with the following results. In neither of the cases was it administered with any regard to regularity. In one case the loss was from 12 lb. to 15 lb. in about two months; in another the diminution in weight was 30 lb. in three months; in the third case there was decided relief from the discomfort under which the patient laboured."

"THE PATHOLOGY OF HERPES ZOSTER: 'ABERRANT VESICLES.'"

To the Editors of THE LANCET.

SIRS,—In an annotation in THE LANCET of Sept. 24th it is said, in discussing the prevalence of "aberrant vesicles," "for these vesicles have never been observed, as far as we know, in this country." My colleague, Dr. W. A. Mackay, described such in a paper entitled "An Unusual Case of Zona," which was published in the *Glasgow Medical Journal* for October, 1897.

I am, Sirs, yours faithfully,

ALEX. JOHNSTON.

City of Glasgow Fever Hospital, Sept. 27th, 1898.

"POISONOUS SHRIMP PASTE."

To the Editors of THE LANCET.

SIRS,—It would be interesting to know the precise history of the preparation of the shrimps which when consumed at St. Anne's-on-the-Sea produced symptoms of acute poisoning. Some years ago, when holding a dispensary appointment in Liverpool, I happened one day to be shown into a ground-floor room of the most filthy description, where a dirty old Irishwoman was busily engaged in peeling shrimps. It was a hot summer day and her hands looked as if they had not been washed for months. I asked her whether she was peeling the shrimps for her own consumption or for others and was told that she did it for her living. "What becomes of them then?" I asked, and was informed that they were potted and sold in Southport. Then I remembered having noticed in the windows of various restaurants in that town tempting-looking white pots containing shrimps embedded in butter which I had innocently supposed to have been a native product prepared on the premises. I have never eaten potted shrimps since that day.

I am, Sirs, yours faithfully,

Clifton, Sept. 30th, 1898. C. J. WHITBY, M.D. Cantab.

URÆMIA.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of June 4th, 1898, an article was published on the Prognosis and Treatment of Uræmic Convulsions, with notes of two cases. My attention has been drawn to the first case, viz., that of a Derbyshire clergyman, and I am disposed to question the diagnosis of uræmia. In my opinion the history of the case—the facial congestion, the stertorous breathing, the high tension pulse, the hypertrophied heart, and the coma—all point to one cause—viz., increased vascular tension, an overfilled and rigid system putting an extra strain upon those vessels which anatomically are least able to withstand the same. The patient being of plethoric habit it is possible that an excess of urea or uric acid in the blood would predispose to increased arterial tension. In such a manner also would the active physical habits, and in other cases the gouty habits, the absorption of lead, the use of alcohol, and such like factor induce cardiac hypertrophy and arterial rigidity; but they are but factors, and in the above case the history of an active physical life is as important as the history of a healthy appetite, and taken together in his case with possible other factors unknown or non-stated (such as the use of alcohol), tend to produce the same condition—viz.: arterial degeneration. As regards the urine only the faintest trace of albumin was detected, the specific gravity was 1030 and there was a free deposit of urates. Now, from the point of view of failure of renal function it appears, on the contrary, from the scanty evidence produced that the kidneys were healthy and were discharging both water and urea freely. By the fact that there was no albumin found in the urine—the evidence is in favour of a normal secretion by the tubes. Moreover the treatment showed that as soon as the vascular tension was relieved by active purgation the patient regained consciousness, recovered, and lived for two years, whereas in uræmia a patient may suffer from profuse diarrhœa for several days previously to death, the blood and tissues being loaded with urea, and in nowise influence the ultimate result; and should the condition of the kidneys by disease be accountable for so serious a condition of coma by retention of urea in the blood, the fact that there is little or no evidence of such disease so detected by examination of the urine is hard to explain away. And the term "uræmia" has been associated hitherto with a definite renal lesion, whereby the accumulation of urea in the blood and tissues is due to faulty elimination by the tubal epithelium and acting on centres either directly or indirectly by peripheral stimulation. To sum up, Was the coma due to toxæmia (such as uræmia) or to cerebral hæmorrhage?

I am, Sirs, yours faithfully,

A. P. WALTERS, M.R.C.S. Eng.

Tilt Cove, Newfoundland, Sept. 13th, 1898.

*** We have omitted the re-statement of the case made by our correspondent, as the original paper (The Prognosis and Treatment of Uræmic Convulsions and Coma, with Special Reference to the Senile Kidney, by Arthur T. Wilkinson, B.A., B.Sc., M.D. Lond.) will be found in THE LANCET of June 4th, 1898, page 1524.—ED. L.

"WANTED DIAGNOSIS AND TREATMENT."

To the Editors of THE LANCET.

SIRS,—In reply to the letter under the above heading signed "L. M." in THE LANCET of Sept. 24th I beg to say that the diagnosis is "gouty migraine." If "L.M." will read my paper headed "On Migraine" in THE LANCET of Jan. 14th, 1893, p. 79, he will find the puzzle explained. Three weeks at Harrogate will probably set him up for the next six months, if not for a longer period.

I am, Sirs, yours faithfully,

Colchester, Sept. 26th. ALEXANDER WALLACE.

To the Editors of THE LANCET.

SIRS,—The gouty headache that "L. M." complains of would probably be controlled by the following treatment: complete absence of alcohol and butcher's meat from the diet and 5 gr. of salicylate of soda one hour after meals. Let him take a Turkish bath two days before the paroxysm is due.

I am, Sirs, your faithfully,

Oct. 2nd, 1898. F. N.

"THE MEDICAL DIRECTORY."

To the Editors of THE LANCET.

SIRS,—In reply to the letter of the publishers of the "Medical Directory" in THE LANCET of Oct. 1st will you permit me to say that it is no doubt true that Parliament has for administrative convenience caused certain statutes to apply to Monmouthshire as well as to Wales? These statutes are, however, exceptional in character and insignificant in number and in every instance Monmouthshire is specifically named—an indication that Parliament has not considered Monmouthshire to be a part of Wales. On the other hand, in general statutes applying to Wales alone—the Sunday Closing Act for Wales, for example—Monmouthshire is never included in the area affected by the Acts. Messrs. Churchill practically give their case away in adducing the example of the Cardiff College, for, as they correctly state, the title of the College is "The University College of South Wales and Monmouthshire," an indication, if any were needed, that Monmouthshire is not a part of South Wales, and no one, I suppose, would consider it a county of North Wales. Will you, of your courtesy, allow me to make a last appeal to them? If they be determined to retain a Wales section in the Directory will they follow the example to which they appeal and entitle that section "Wales and Monmouthshire"? If they will, then we Monmouthshire men will have little cause to complain.

I am, Sirs, yours faithfully,

A MONMOUTHSHIRE SUBSCRIBER OF THIRTY YEARS' STANDING.

Oct. 1st, 1898.

To the Editors of THE LANCET.

SIRS,—Of the various references required to be made to the Medical Directory two only are of sufficient importance to be considered seriously in any re-arrangement. These are (1) the location of a medical man being unknown, the desire to find it, and (2) the location being known, the desire to know all about him, as, for instance, his address, qualifications, &c. After mature reflection I have come to the conclusion that both these requirements would be met,

with less loss of time and money, by the adoption of the following arrangement than is the case under existing conditions. I suggest (1) that all the names now sectionally separated be alphabetically arranged under one general list of British (and Irish) qualified medical men. (2) That a capital letter be placed in the margin opposite each name, sufficiently prominent to catch the eye, suggesting the location of each, as follows: L, E, W, S, I, F, N, and M, representing London (postal district), England (provincial, including Monmouthshire), Wales, Scotland, Ireland, Foreign (practitioners resident abroad), Naval, and Military. This would obviate the objection which might be raised against having to search through a long list of names where the location is known; all letters except the one denoting the locality required would be passed over. (3) That the local lists be converted into one general localised list, excepting the London street list, which would be more convenient to be kept separated. (4) That the universities, colleges, and medical schools be placed under the heading "Medical Education." It appears to me that under this re-arrangement the book itself would be less cumbersome, and much labour would be saved to those who are engaged in preparing it. It would certainly be more convenient to the profession at large.

I am, Sirs, faithfully yours,

A SUBSCRIBER OF TWENTY-FIVE YEARS' STANDING.

Oct. 3rd, 1898.

A POINT IN MEDICAL EVIDENCE AT CORONERS' INQUESTS.

To the Editors of THE LANCET.

SIRS,—I was called out one night at 11.35 to see a man who was said to be dead; I went and found that he was dead. It seems that before they came for me they had sent for another medical man, who had attended the man a month before for some affection of the heart. Two days after my visit to the man a coroner's officer called to say that the other medical man was to attend at the inquest. I should like to know what your view of the matter is.

I am, Sirs, yours faithfully,

Oct. 3rd, 1898. R. M. R.

*** It is not necessary that the last medical man who saw the dead body should give evidence at the inquest, for it often happens that he is not the regular medical attendant whose evidence may be required to explain the death.—ED. L.

BARKOO-ROT?

To the Editors of THE LANCET.

SIRS,—Could you or any of your correspondents give me any information as to a disease called in Western Australia "barkoo-rot," and also the best remedy for the same? It is apparently a skin disease affecting the hands of miners who use instruments made of a certain kind of wood.

I am, Sirs, yours faithfully,

Sept. 28th, 1898. Z.

INCORRECT MEDICAL CERTIFICATES.

To the Editors of THE LANCET.

SIRS,—From time to time we read in the daily papers of medical men giving certificates of inability of patients through sickness to attend as witnesses in the law courts, and later in the day such witnesses calmly walking into the court, thus proving the medical man either to be a fool or a liar. A case in point is that concerning a jury list related in the *Daily Telegraph* of Sept. 28th. A gentleman attended and claimed to be taken off because he was deaf. Hitherto his name had been taken off, he said, on his sending a medical certificate. On examination, however, the chairman found that he was not deaf and the story ends by saying that he was retained on the list. I think, Sirs, that the name and address of these blackguards who will write a false certificate for a fee of 2*s.* 6*d.* should be posted up at the end of THE LANCET every week with an editorial remark. Will the daily papers please copy?

I am, Sirs, yours faithfully,

St. Day, Cornwall, Sept. 29th, 1898. E. H. WORTH, M.R.C.S. Eng.

*** In our experience such cases are but seldom heard of. Nor does the "case in point" impress us much. For if a wily citizen called on a medical man and said he was deaf, and if it appeared from ordinary tests that he could not hear, it would be the duty of the medical man to give a certificate to that effect. We do not see any evidence that the medical man knew that an imposition was being attempted or that he sold his signature from corrupt motives.—ED. L.

WEIR-MITCHELL TREATMENT.

To the Editors of THE LANCET.

SIRS,—Will one of your correspondents kindly inform me of the address of a private institution where a lady patient may undergo the Weir-Mitchell method of treatment for neurasthenia or chronic neuralgia?

I am, Sirs, yours faithfully,

Oct. 3rd, 1898. W.

THE CLIMATE OF UGANDA.

To the Editors of THE LANCET.

SIRS,—I want information on the climate of Uganda—its temperature and statistics as to fever and death-rate among Europeans. Can any of your readers help me in the matter?

I am, Sirs, yours faithfully,

Oct. 3rd, 1898. ASHBY.

POLARITE.

To the Editors of THE LANCET.

SIRS,—(1) Is polarite a reliable filtering medium? (2) If it does not act as a filter what is its action in the purification of water, if any?

I am, Sirs, yours faithfully,

Christchurch, Hants, Sept. 29th, 1898. R. LLOYD LEGATE.

PRURITUS ANI.

To the Editors of THE LANCET.

SIRS,—In reading a report of one of the medical societies lately which was reported briefly in THE LANCET I noticed that the subject of pruritus ani was touched upon by several of the speakers and the statement was made by Mr. Allingham that in 50 per cent. of the cases where no obvious cause was found an acrid rectal secretion would account for its etiology. I have been a sufferer from the complaint for many years and am confident that the condition named is the cause o it. I have tried innumerable remedies with little or no benefit. My object in writing to you is to ask if Mr. Allingham or some other competent authority will be good enough to state their views as to the appropriate treatment for the conditions above mentioned. Theoretically, a weak carbolic or astringent injection seems indicated, but I shall esteem it a favour if an opinion would be given on the subject.

I am, Sirs, yours faithfully,

August 20th, 1898. A TWENTY YEARS' SUBSCRIBER.

THE NEW PHARMACOPŒIA.

THE British Pharmacopœia of 1898 is having as favourable a reception as it well could have had. The sales of it up to Sept. 22nd were 18,220.

Bijou can obtain full information from her medical attendant.

Mr. J. O. Neumann.—We cannot notice an instrument which we have had no opportunity of testing or seeing at work.

Cantab. should apply to the dean of some medical school for a tutor but we are not quite sure whether he could get signed up by private teaching. He might also consult the list of medical teachers on page 657 of the Students' Number of THE LANCET.

Subscriber.—Inasmuch as the dentist in question is not registered in this country he must be looked upon as an unregistered practitioner. The administration of an anæsthetic by a medical man for an unqualified dental practitioner is to be regarded as an act of unprofessional conduct.

Microbe will find a full account of the Exeter septic tank system in "Purification of Sewage and Water" (Sanitary Publishing Company, Limited, 5, Fetter-lane), by Mr. W. J. Dibdin. Mr. C. G. Moor has also written a small pamphlet on the subject which is published by Mr. W. H. Hewlett, Wivenhoe.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Oct. 6th, 1898.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
Sept. 30	29·65	S.E.	0·22	64	60	53	53	54	Overcast
Oct. 1	30·23	N.E.	...	93	64	49	48	51	Hazy
,, 2	30·37	W.	...	90	66	45	48	50	Foggy
,, 3	30·28	E.	...	104	71	49	55	57	Hazy
,, 4	30·31	E.	...	73	64	57	58	60	Raining
,, 5	30·23	E.	...	64	62	59	57	59	Raining
,, 6	30·09	S.E.	...	65	62	59	58	60	Overcast

During the week marked copies of the following newspapers have been received: *Dundee Advertiser, Kenilworth Advertiser, Dunoon Herald, Midlothian Journal, Glasgow Herald, Times of India, Pioneer Mail, Yarmouth Advertiser, Newcastle Chronicle, Llandudno Directory, Kentish Observer, Elgin Courant, Auckland Chronicle, Liverpool Daily Post, Scotsman, Brighton Gazette, Architect, Builder, South Wales Daily News, Brisbane Courier, Western Mercury, Cambridge Chronicle, Birmingham Post, Bedford Standard, Kingston News, Bristol Mercury, Sussex Daily News, Chester Chronicle, Derby Daily Telegraph, Hampshire Post, High Peak News, Citizen, Torquay Times, Bedford Times, Yorkshire Post, Manchester Courier, Carnarvon Herald, Northampton Reporter, Ilfracombe Gazette, Leeds Mercury, Sanitary Record, City Press, Local Government Chronicle, Reading Mercury, Mining Journal, Hertfordshire Mercury, Radnorshire Standard, County Gentleman, Bristol Times and Mirror, Surrey Advertiser, The Freemason, Gillingham Record, Monmouth Beacon, The Galignani Messenger, Amateur Photographer, Aberdeen Herald, Public Health, North Herts Journal, Sheldrake's Aldershot and Sandhurst Gazette, Local Government Journal, Eastbourne Gazette, Skegness Herald, Kendal and County News, Warrington Observer, Pudsey District Advertiser, &c., &c.*

Communications, Letters, &c., have been received from—

A.—Messrs. Armour and Co., Lond.

B.—Mr. G. A. Brown, Tredegar; Mr. L. Buck, Bolton; Dr. F. E. Batten, Lond.; Belfast Hospital for Sick Children, Secretary of; Mr. C. Birchall, Liverpool; Mr. T. W. Bevan, Nantyglo; Messrs. Budden, Fisher, and Co., Lond.; Messrs. Burroughs, Wellcome, and Co., Lond.; Messrs. Bates, Hendy, and Co., Lond.

C.—Dr. H. A. Caley, Lond.; Dr. J. Clarke, St. Moritz; Chelsea Hospital for Women, Secretary of; Cortland Wagon Co., Lond.; Mr. W. P. Cox, Leicester; Messrs. Clark, Son, and Platt, Lond.; Dr. A. Crawford, Lond.; Cosford, Union, Clerk of; Mr. S. H. Croucher, Lond.

D.—Mr. F. Deas, Lond.; Messrs. G. L. Daube and Co., Frankfurt-on Main; Dundee Royal Lunatic Asylum, Secretary of; Messrs. Duncan, Flockhart and Co., Edinburgh; Messrs. Davies and Rhys, Aberdare; Domen, Lond.; Dr. A. S. Dick, Glasgow.

E.—Mr. J. B. Emmerson, Biggleswade; Dr. W. Ewart, Lond.; Mr. S. Edwards-Jones, Bangor Isycoed; Examination Hall, Lond., Secretary of; Mr. J. B. Endean, Cockington; Messrs. Ede and Son, Lond.

F.—Dr. F. François, Marseilles; Miss A. Frith, Lond.; Messrs. Ferris and Co, Bristol; Messrs. Fannin and Co., Dublin; Dr. C. E. FitzGerald, Folkestone.

G.—Great Yarmouth Hospital, Hon. Secretary of; G. J. M.; Dr. G. M. Gould, Philadelphia; Messrs. W. Green and Sons, Edinburgh.

H.—Mr. E. J. Howley, Hetton-le-Hole; Hospital for Sick Children, Assistant Secretary of; Mr. H. Hutchinson, East Ham; Mr. J. Heginbotham, Stalybridge; Mr. L. Hartley, Lond.; Hospital for Consumption, Brompton, Lady Superintendent of; Mr. W. C. Herring, Paris; Mr. J. Heywood, Manchester; Mr. W. Hosking, Masterton, New Zealand; Mr. R. Harrison, Lond.; Hastings, &c., Hospital, Secretary of; H. G.

I.—International News Co., Lond.

J.—Mr. G. Jerrard, Lond.; J. A. T.

K.—Dr. A. A. Kanthack, Cambridge; Kronthal Co., Lond.; Dr. A. E. Kelsey, Gosport.

L.—Mr. H. K. Lewis, Lond.; Leeds Union, Clerk of; Mr. H. S. Little, Reading; Liebig's Extract of Meat Co., Lond.; Dr. C. Lester Leonard, Philadelphia.

M.—Dr. R. G. McCalman, Lond.; Dr. P. W. McDonald, Dorset; Mr. F. H. Moore, Spondon; Macclesfield Union, Clerk of; McMurray's Royal Paper Mills, Wandsworth; M. O'B.; Dr. J. S. McKendrick, Glasgow; Messrs. Macmillan and Co., Lond.; *Medical and Surgical Review of Reviews*, Secretary of; Messrs. C. Mitchell and Co., Lond.

N.—National Society for Aid to the Sick and Wounded in War, Lond., Secretary of; National Hospital for the Paralysed and Epileptic, Lond., Secretary of; National Telephone Co., Lond., District Manager of.

O.—Dr. H. O'Neill, Belfast; Dr. W. R. Orr, Newington; Mr. F. Orchard, Lond.; Dr. W. Osler, Baltimore, U.S.A.; Mr. A. D. Owen, Hampton.

P.—Dr. F. G. Penrose, Lond.; Messrs. Parke, Davis, and Co., Lond.; Mr. Y. J. Pentland, Edinburgh; Mr. Wallace F. Pike, Lond.

R.—Mr. R. M. Russell, Lond.; Dr. E. F. Robinson, Frensham; Messrs. Robertson and Scott, Edinburgh; Dr. A. Roche, Dublin.

S.—Rev. E. Spencer, St. Briavels; Messrs. Savory and Moore, Lond.; Swansea General Hospital, Secretary of; Smith's Advertising Agency, Lond.; Messrs. Spiers and Pond, Lond.; South Devon and East Cornwall Hospital, Plymouth, Secretary of; Sanitary Institute, Lond.; Messrs. Sells, Lond.; Mr. A. Stenhouse, Glasgow; Messrs. Street Bros., Lond.; Mr. Walter Smith, Lond.

T.—Mr. C. F. Turner, Lond.; Dr. H. Tilley, Lond.; Mr. T. H. Thomas, Cilfynydd; Tottenham Public Library, Librarian of.

U.—University of Durham College of Medicine, Newcastle-on-Tyne, Secretary of.

V.—Dr. A. Voelcker, Lond.; Victoria Hospital for Children, Lond., Secretary of.

W.—Mr. W. A. Willis, Monmouth; Mr. R. Watson, Lond.; Wills, Ltd., Lond.; Dr. L. A. Weatherly, Bath; Dr. R. T. Williamson, Manchester; W. M. B.; Messrs. J. Wright and Co., Bristol; Mr. H. C. Wilkins, Lond.

Letters, each with enclosure, are also acknowledged from—

A.—Mr. W. J. Allkin, Denton; Apollinaris Co., Lond.; Messrs. Allen and Hanburys, Lond.; Dr. A. Anderson, Sheffield; Dr. E. Allen, Hawes; A. W., Marsden; Aston Manor Urban District Council, Clerk of; A. R.; A. G. M.; A. A. B.

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